

Compressed Air Analytics

prepared for

Commonwealth Dairy

Brattleboro, VT

August, 2020

sponsored by



prepared by



Vendor Neutral, Energy Biased

Compressor Energy Services

395 Daniel Webster Highway, Unit 1

Merrimack, NH

(888) 788-6188

CompressorENERGY.com

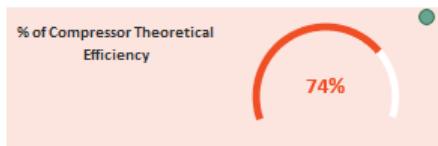


New ES Dash Board

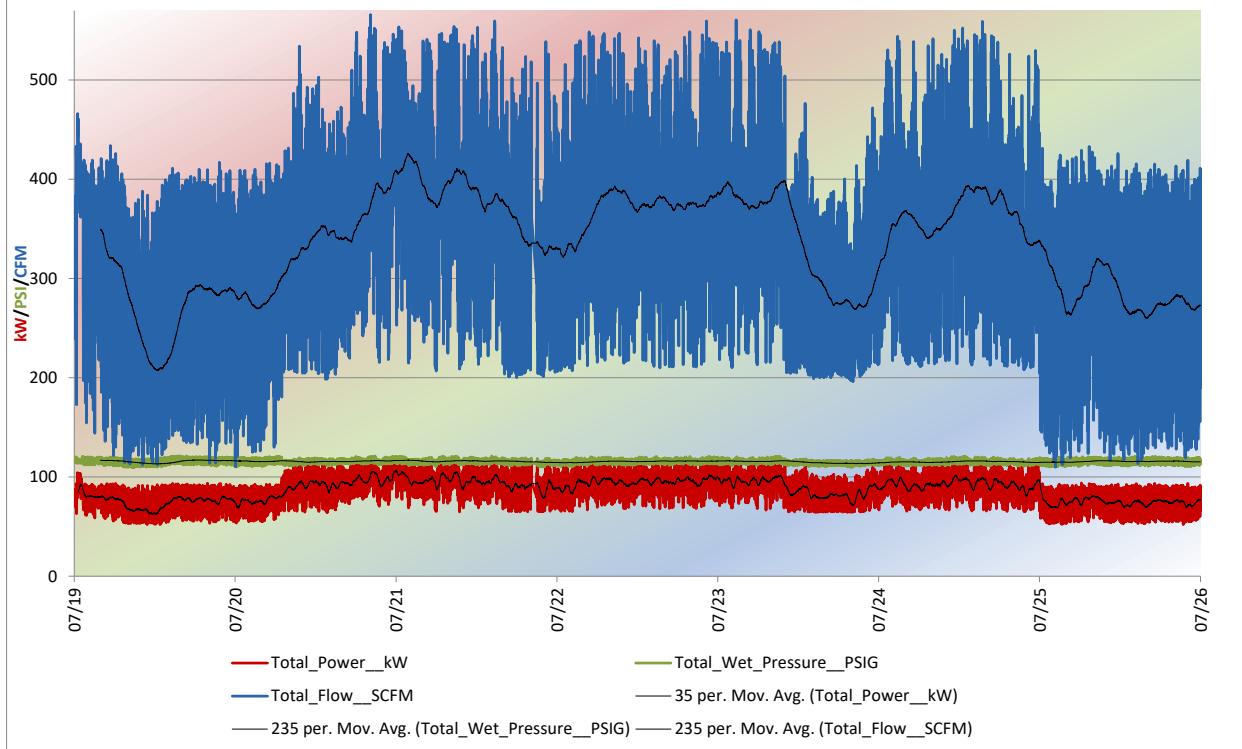
Summary of System

\$91,574
Commonwealth Dairy - Brattleboro, VT

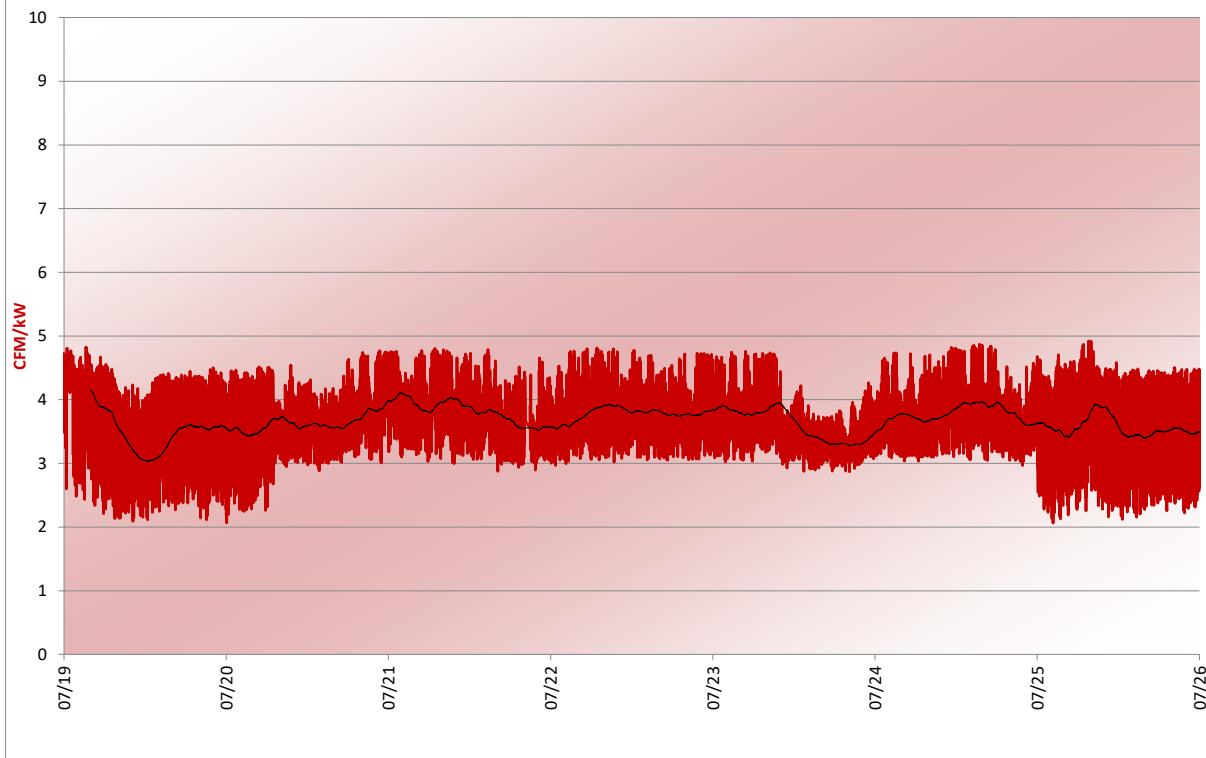
# of Compressors in System	2
Combined System Capacity at Full Load (SCFM)	643
Average Measured Flow (SCFM) ¹	334
Non-Productive Measured Flow (SCFM) ²	109
Cost of Non-Productive Demand (\$/Year) ³	\$ 29,870.13
Combined System Power at Full Load (kW)	123.3
Average Measured Power (kW) ⁴	87.1
Total kWh Consumption (kWh Annually) ⁵	763,115



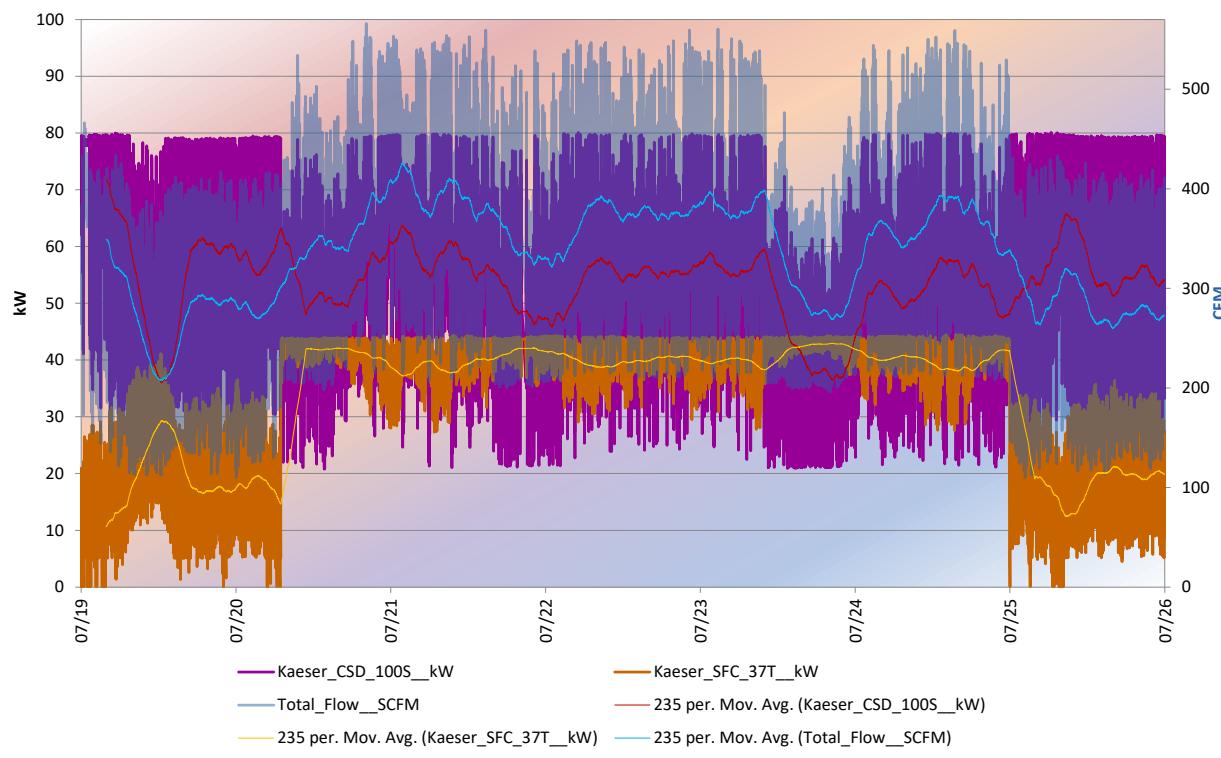
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Jul 19, 2020 to Jul 26, 2020



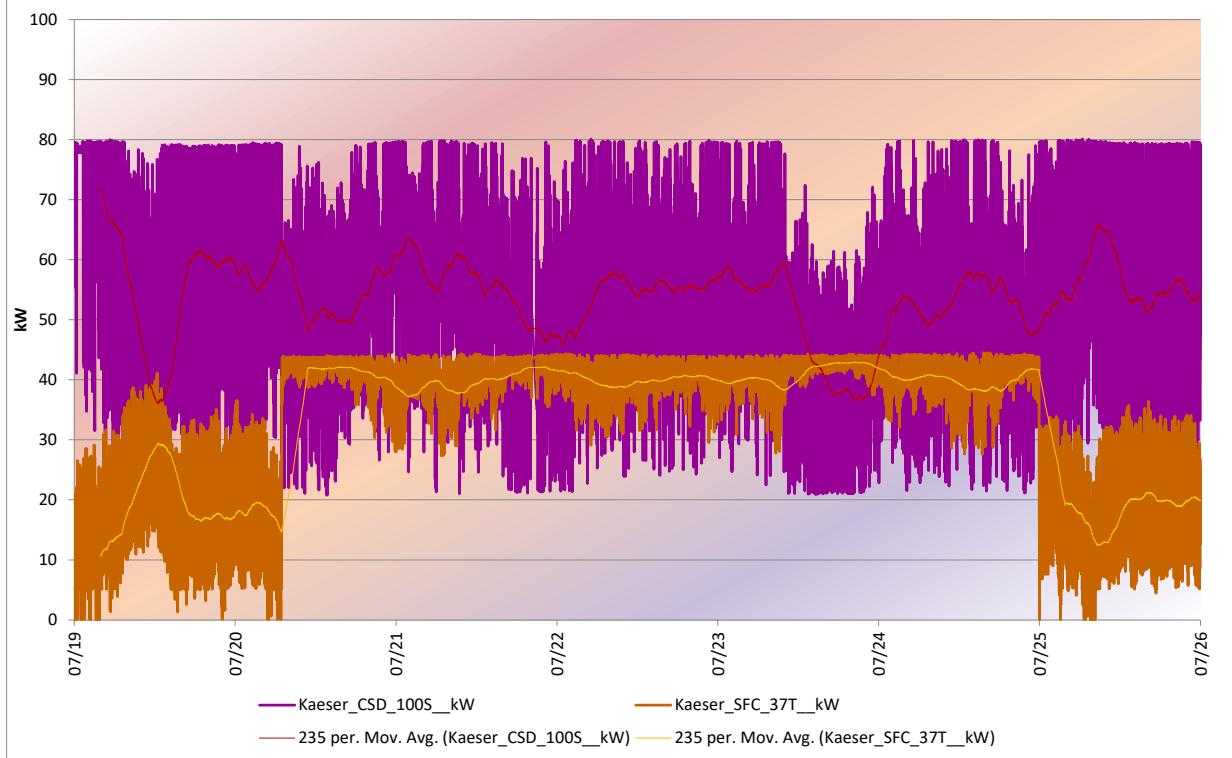
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Jul 19, 2020 to Jul 26, 2020



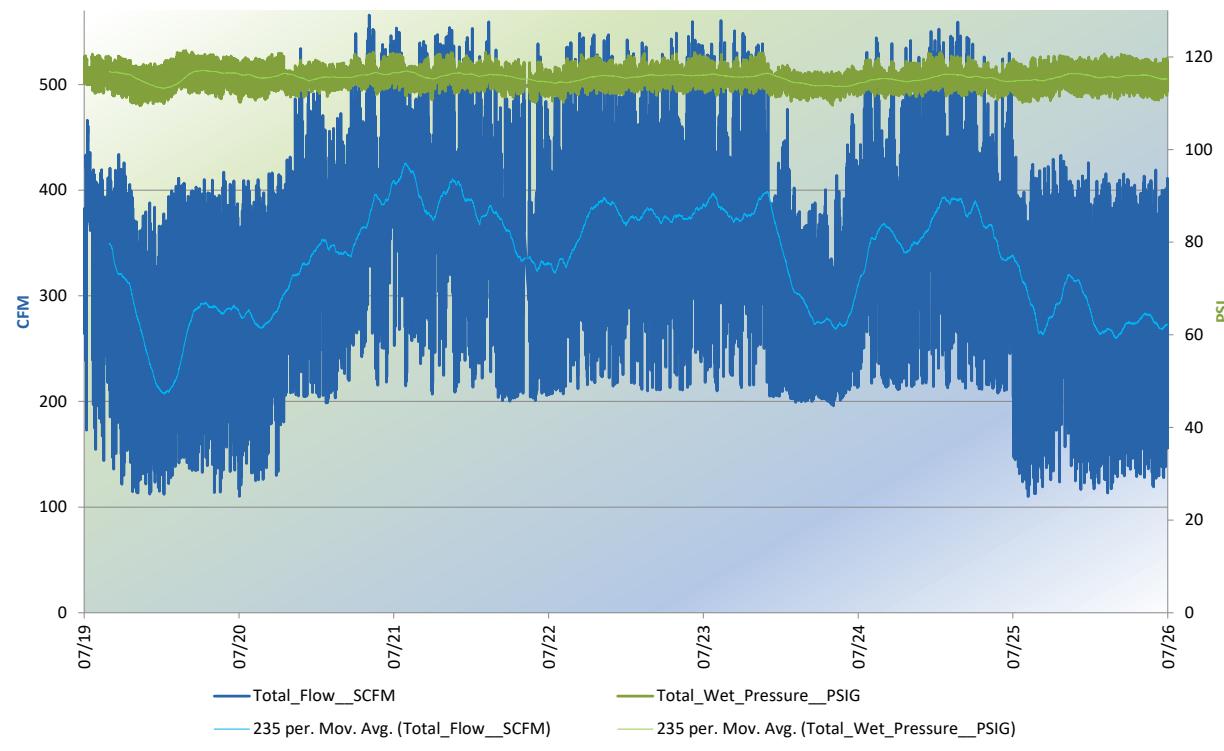
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor and Flow
Jul 19, 2020 to Jul 26, 2020



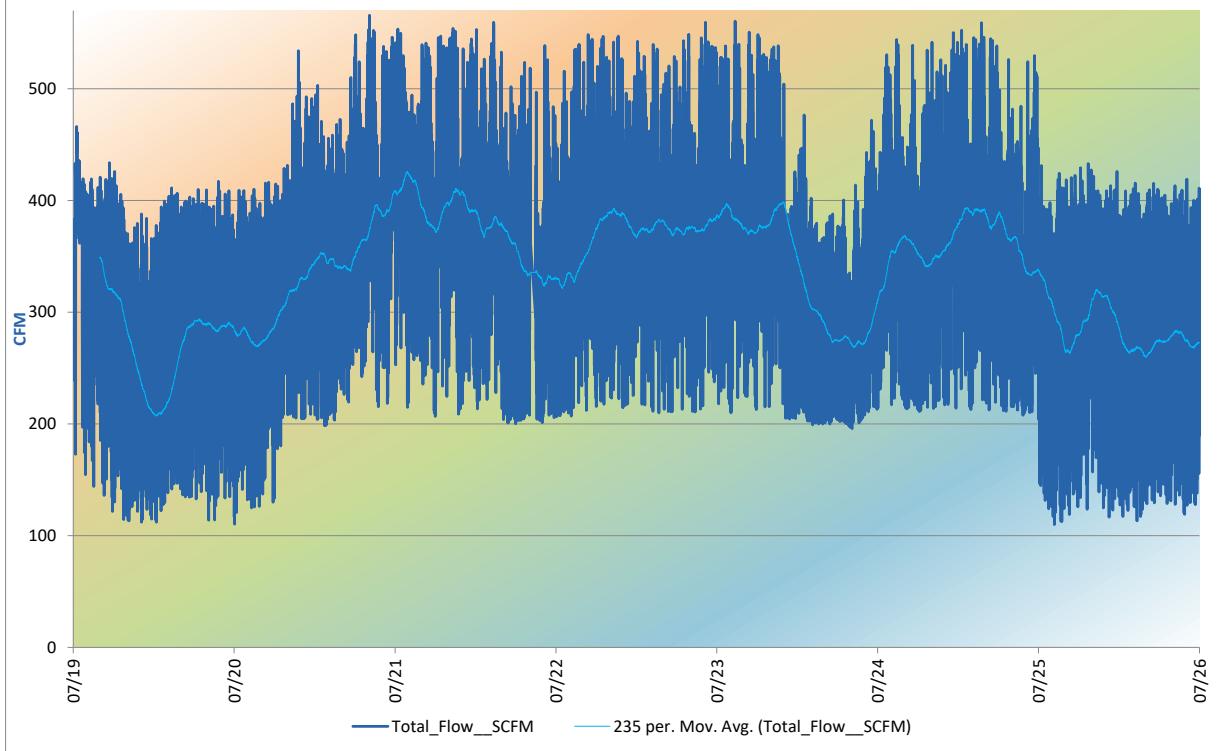
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor
Jul 19, 2020 to Jul 26, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Jul 19, 2020 to Jul 26, 2020

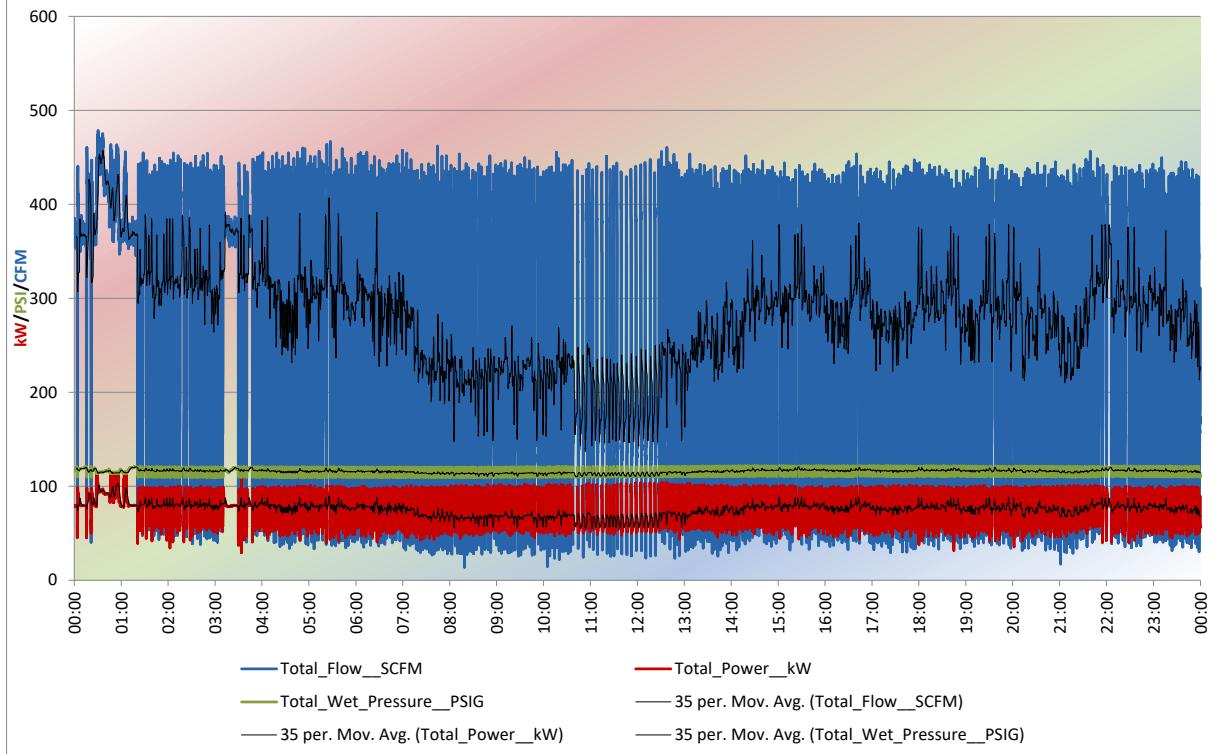


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Jul 19, 2020 to Jul 26, 2020



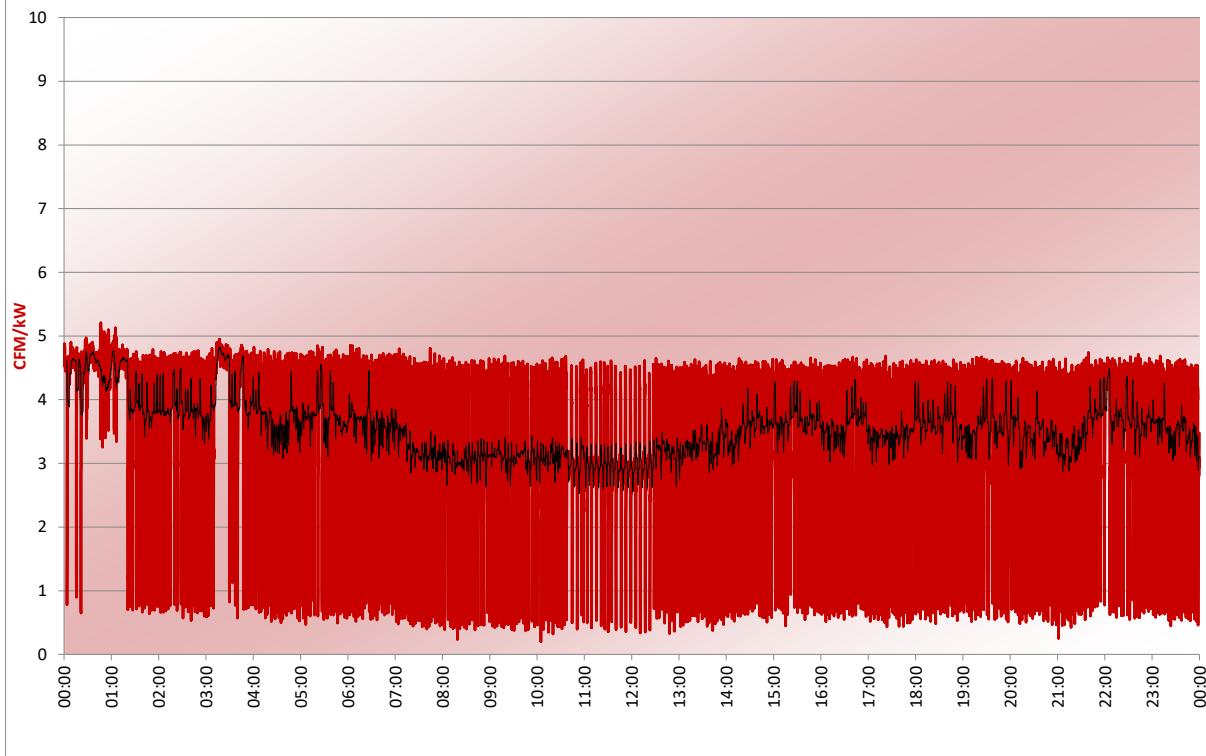
Full Deck: 7/19/2020 to 7/25/2020 - 1-Minute Averages							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.06	20.78	0.09	109.95	52.05		109.52
Avg	3.67	53.99	33.12	334.16	87.11		115.57
Max	4.92	80.11	44.51	565.88	119.68		121.40
Sunday, 7/19/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.09	20.95	0.09	112.15	52.05		109.52
Avg	3.55	56.56	18.78	280.64	75.34		115.78
Max	4.83	80.00	41.07	466.20	104.38		121.40
Monday, 7/20/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.07	20.78	0.09	110.26	53.68		110.16
Avg	3.67	55.21	34.02	340.90	89.23		115.86
Max	4.77	79.62	44.29	565.88	119.68		121.05
Tuesday, 7/21/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.88	21.04	27.30	200.13	64.83		110.18
Avg	3.79	54.61	39.93	371.72	94.54		115.72
Max	4.80	79.85	44.35	559.45	118.28		121.03
Wednesday, 7/22/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.97	21.34	29.08	206.35	65.17		110.16
Avg	3.80	55.08	39.88	374.22	94.96		115.74
Max	4.81	80.09	44.35	559.64	118.62		120.96
Thursday, 7/23/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.87	20.94	27.78	195.89	64.60		109.55
Avg	3.58	47.41	41.16	329.71	88.58		114.88
Max	4.76	79.76	44.33	560.58	118.18		120.91
Friday, 7/24/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.97	21.13	5.05	207.87	65.05		110.70
Avg	3.78	52.88	39.89	363.65	92.77		115.34
Max	4.87	80.01	44.51	559.08	116.33		120.99
Saturday, 7/25/2020							
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG	
Min	2.06	21.01	0.09	109.95	52.14		110.16
Avg	3.55	56.21	18.40	279.45	74.61		115.64
Max	4.92	80.11	36.43	433.14	93.90		120.65

Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Sunday, Jul 19, 2020

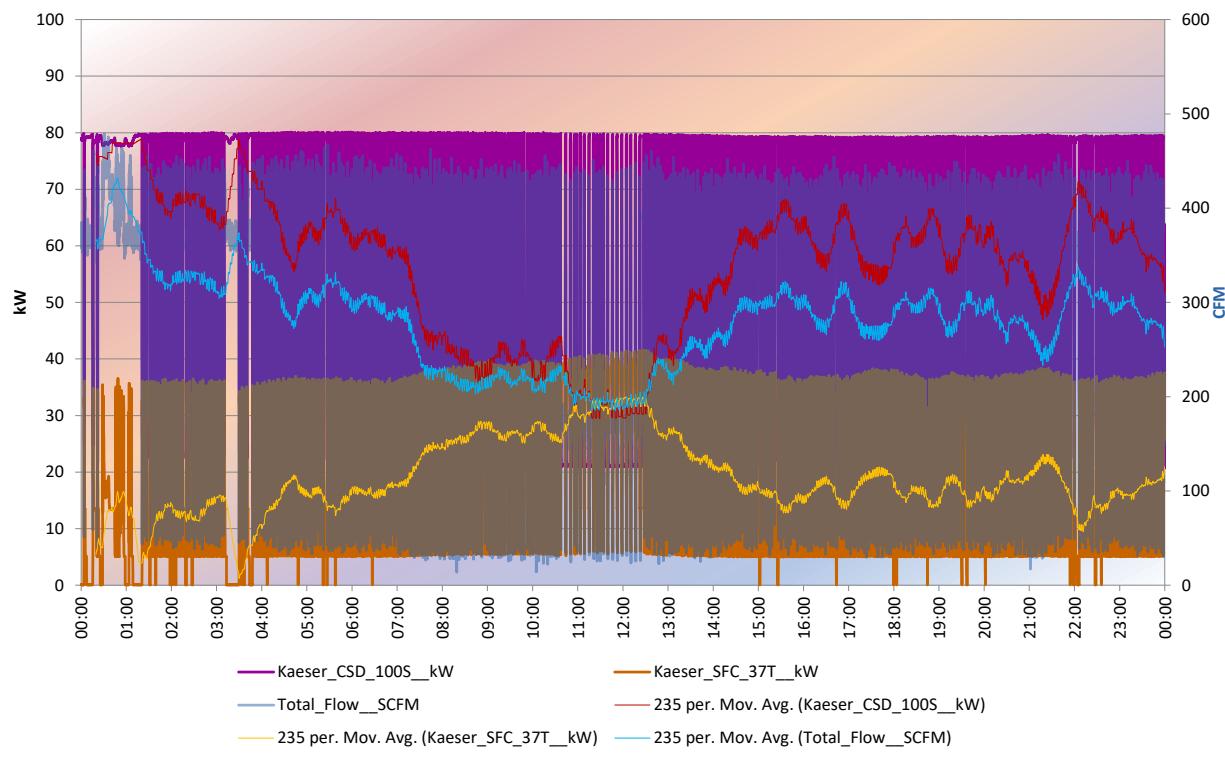


Sunday, 7/19/2020						
First (1st) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.09	20.95	1.32	112.15	52.05	109.52
Avg	3.22	44.90	24.92	236.96	69.83	114.61
Max	4.41	79.23	41.07	411.22	93.56	121.40
Second (2nd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.12	21.06	0.09	113.81	53.38	110.93
Avg	3.56	59.77	17.15	287.06	76.92	116.59
Max	4.50	79.18	35.09	417.11	93.73	121.05
Third (3rd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.13	21.16	0.09	114.48	53.69	110.01
Avg	3.86	65.00	14.26	317.89	79.26	116.14
Max	4.83	80.00	36.12	466.20	104.38	120.64

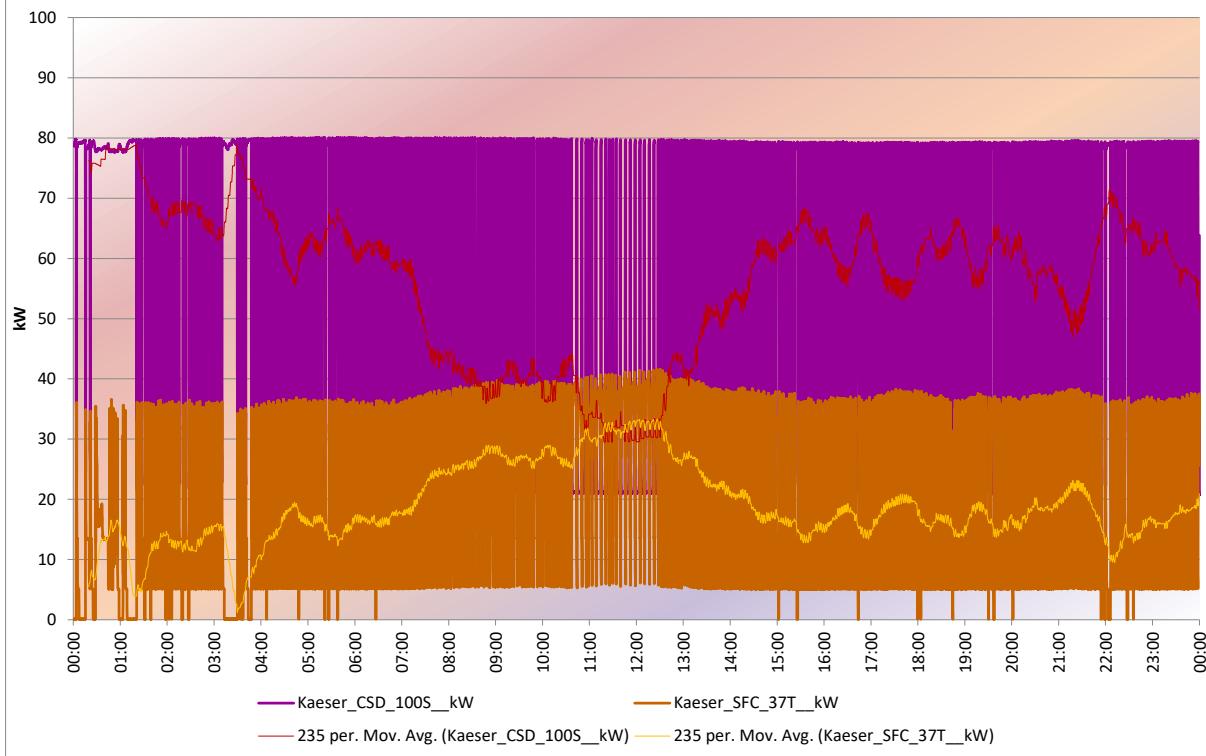
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Sunday, Jul 19, 2020



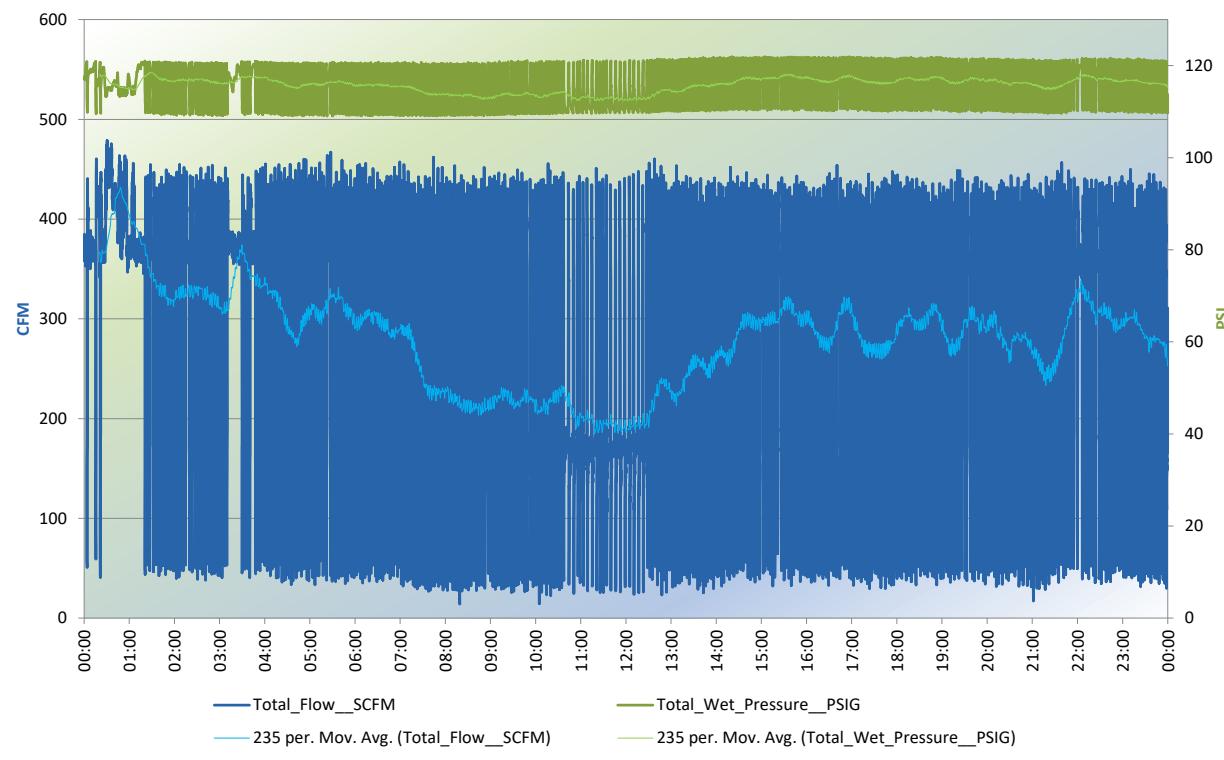
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor and Flow
Sunday, Jul 19, 2020



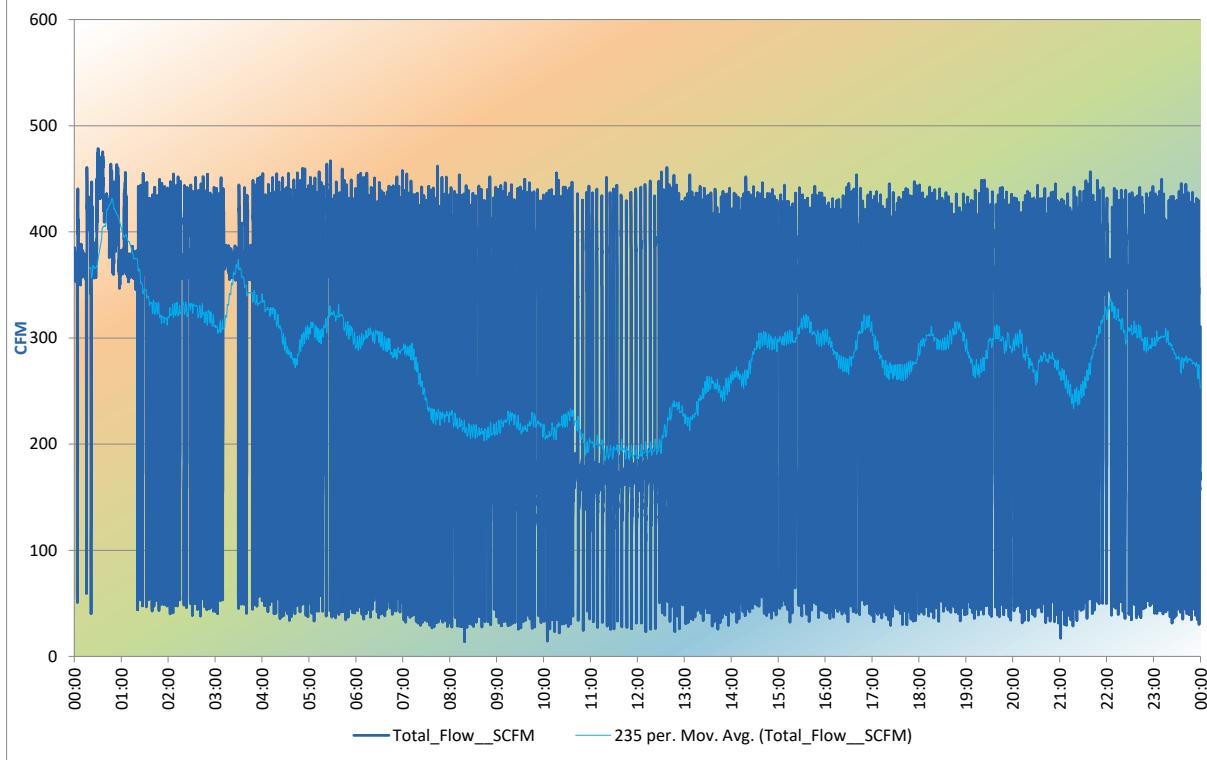
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor
Sunday, Jul 19, 2020



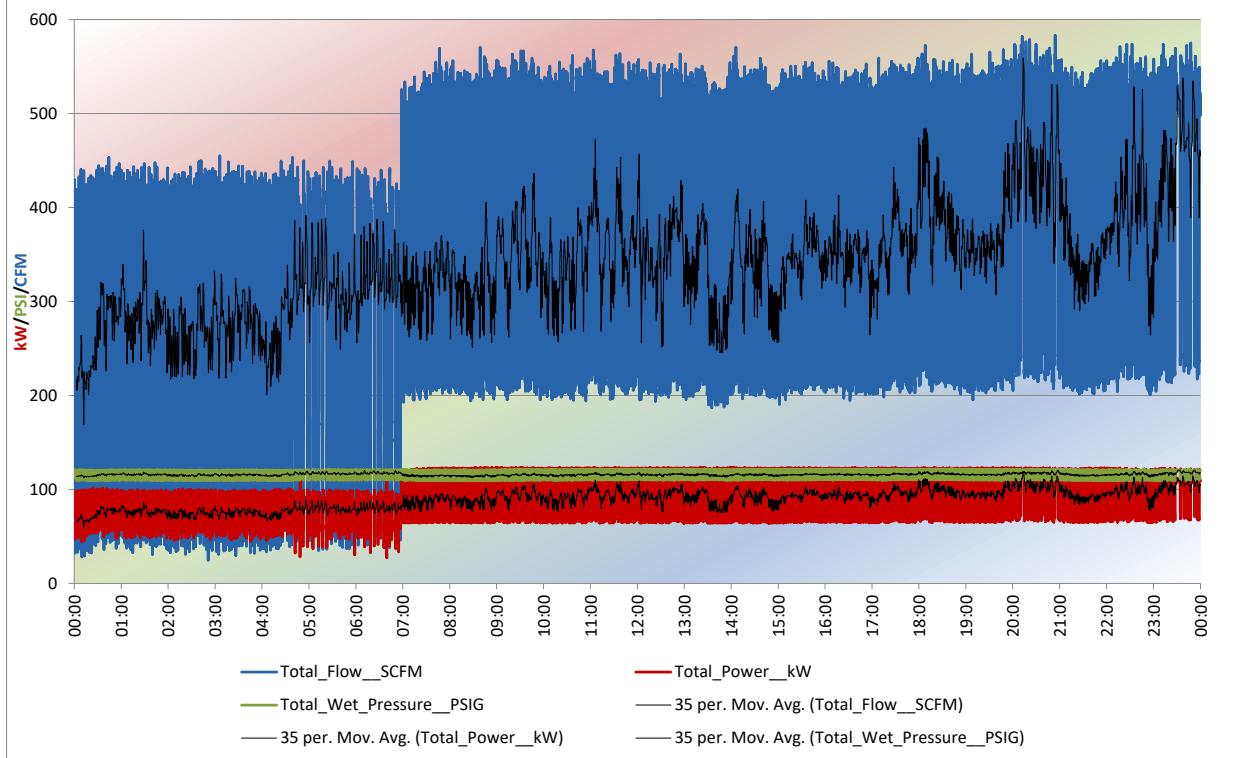
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Sunday, Jul 19, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Sunday, Jul 19, 2020

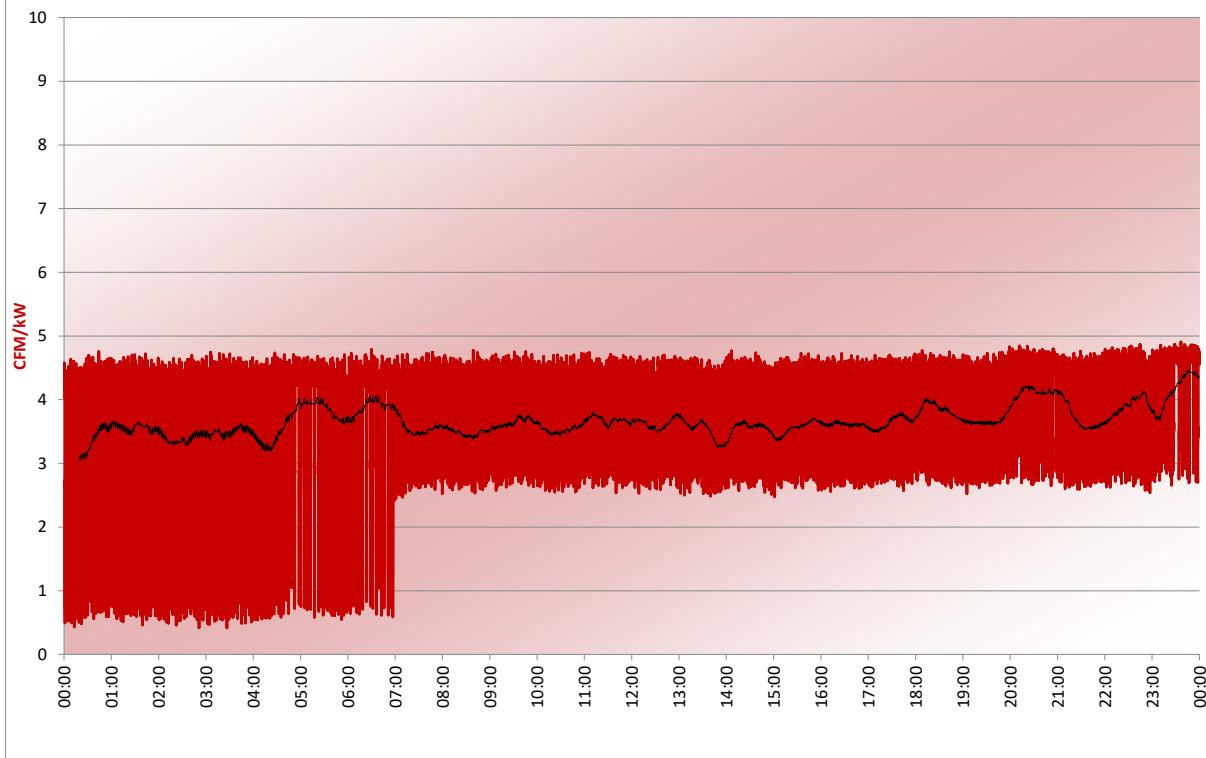


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Monday, Jul 20, 2020

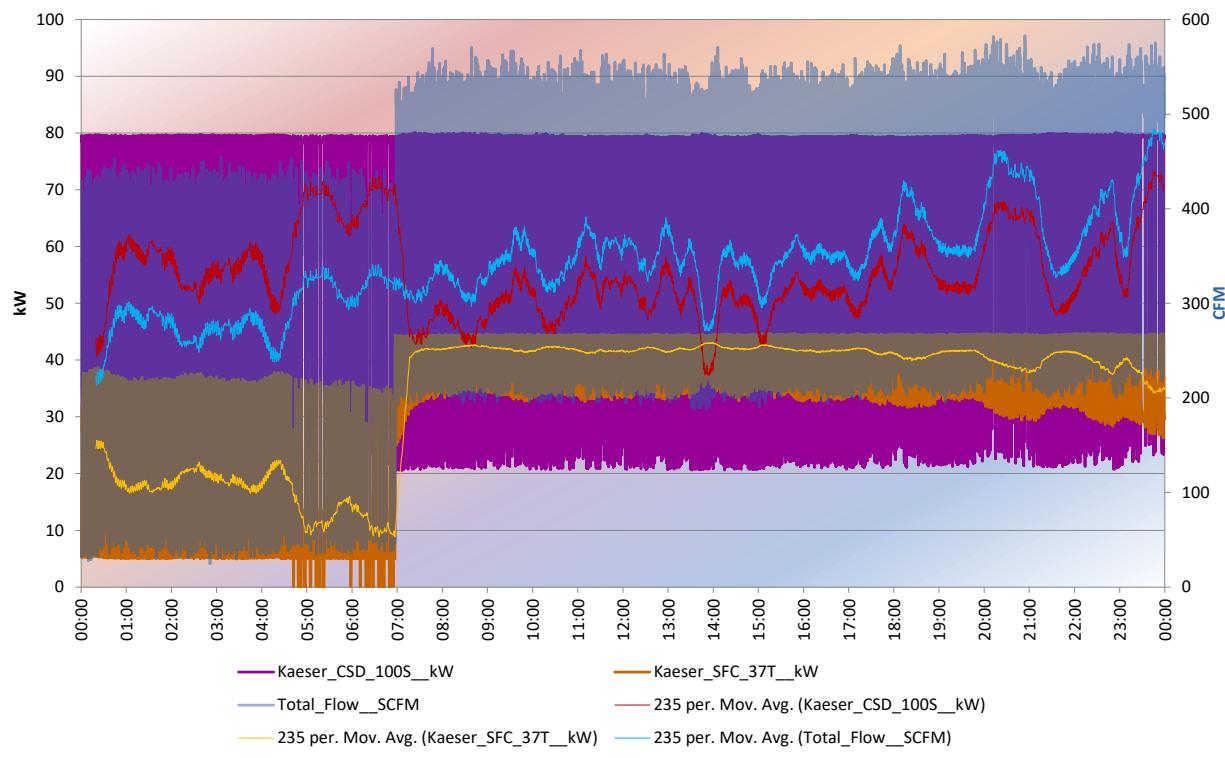


Monday, 7/20/2020						
First (1st) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.88	20.78	38.71	198.46	64.32	111.28
Avg	3.58	50.02	42.00	342.04	92.03	115.40
Max	4.54	78.90	44.03	534.10	117.65	119.36
Second (2nd) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	3.01	26.60	28.08	215.37	70.56	111.94
Avg	3.84	57.76	40.03	388.81	97.79	116.37
Max	4.77	79.62	44.29	565.88	119.68	121.05
Third (3rd) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.07	20.80	0.09	110.26	53.68	110.16
Avg	3.58	57.85	20.03	291.86	77.88	115.82
Max	4.52	79.51	43.98	431.44	107.21	120.82

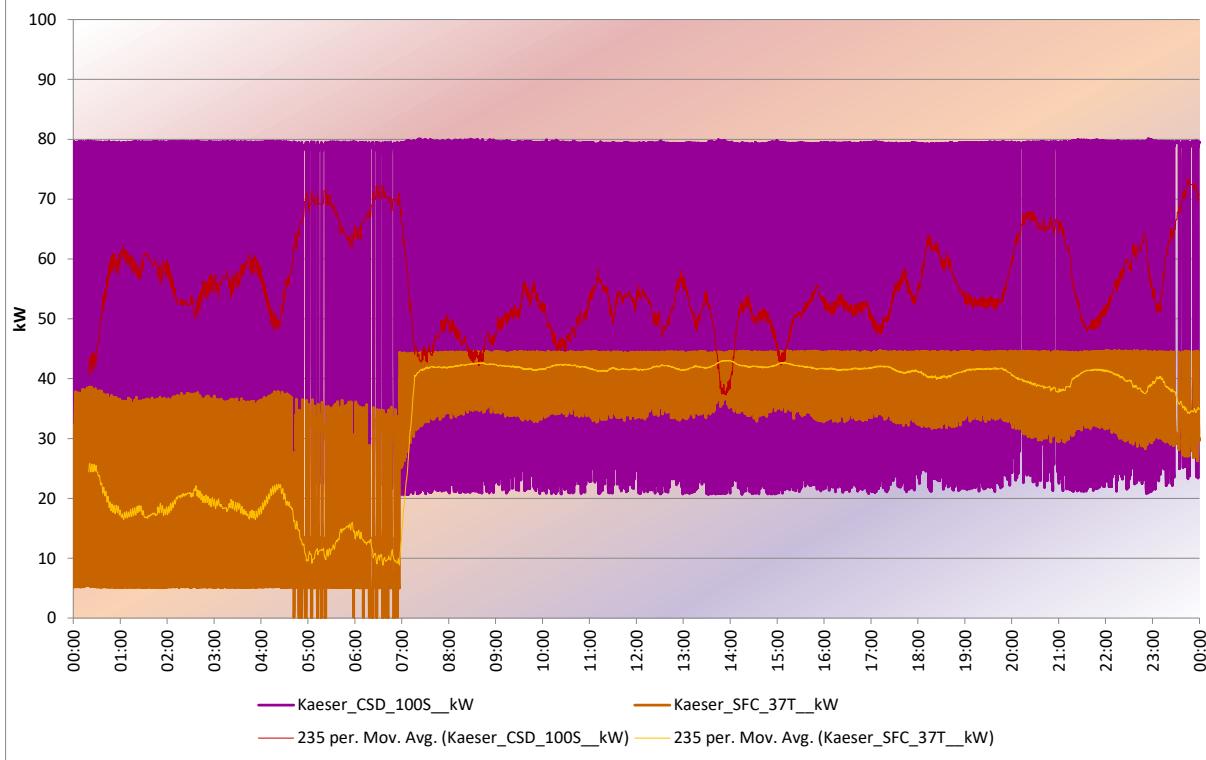
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Monday, Jul 20, 2020



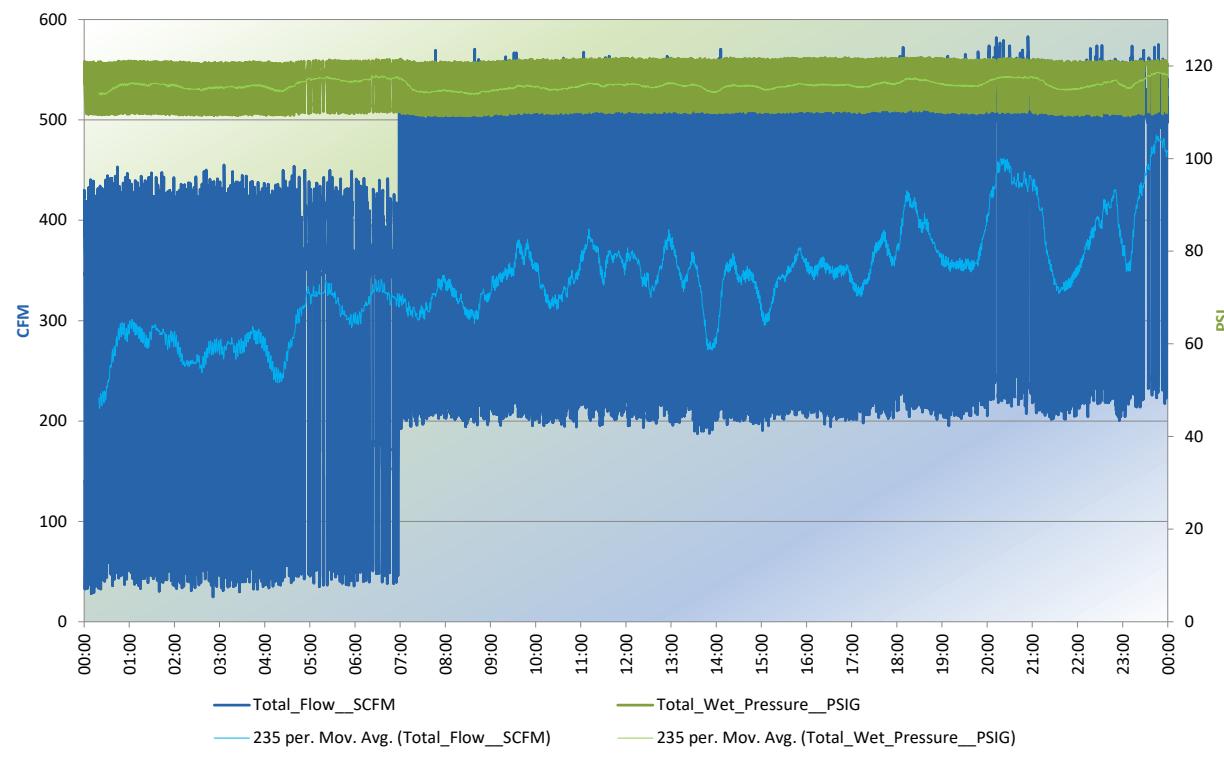
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Compressed Air System Data - Power by Compressor and Flow
Monday, Jul 20, 2020



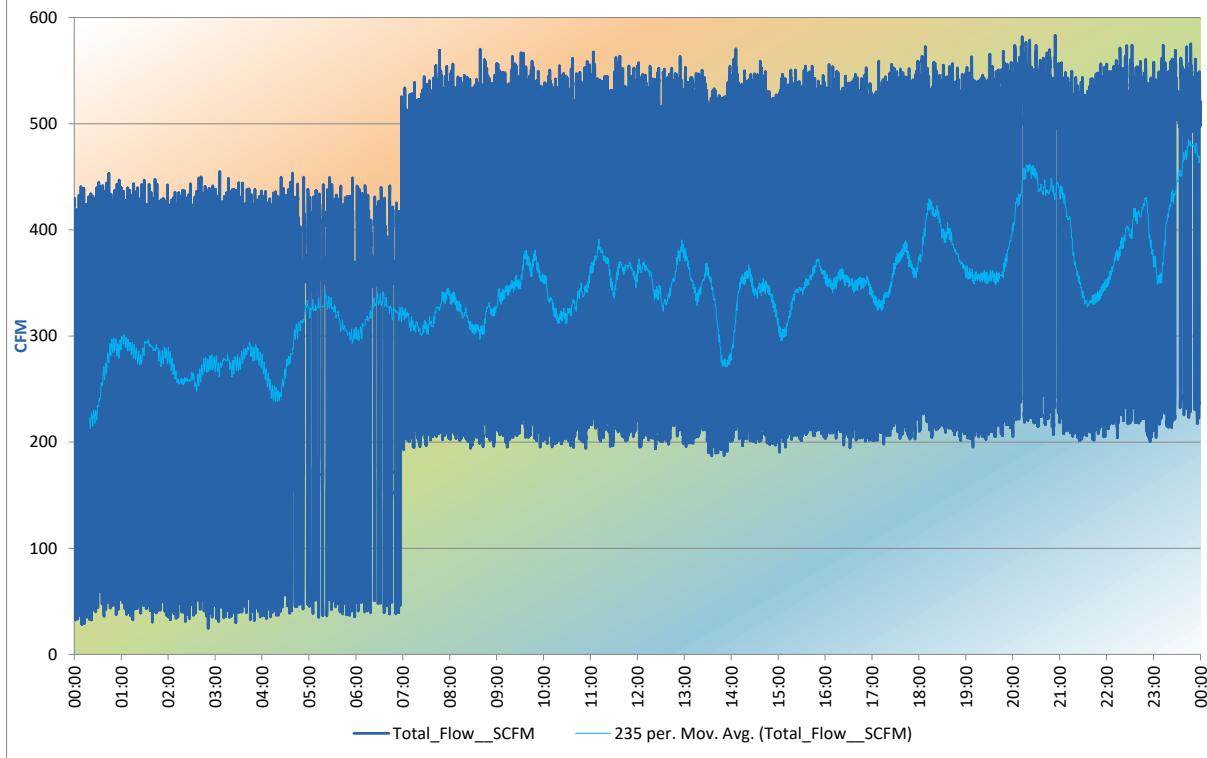
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Compressed Air System Data - Power by Compressor
Monday, Jul 20, 2020



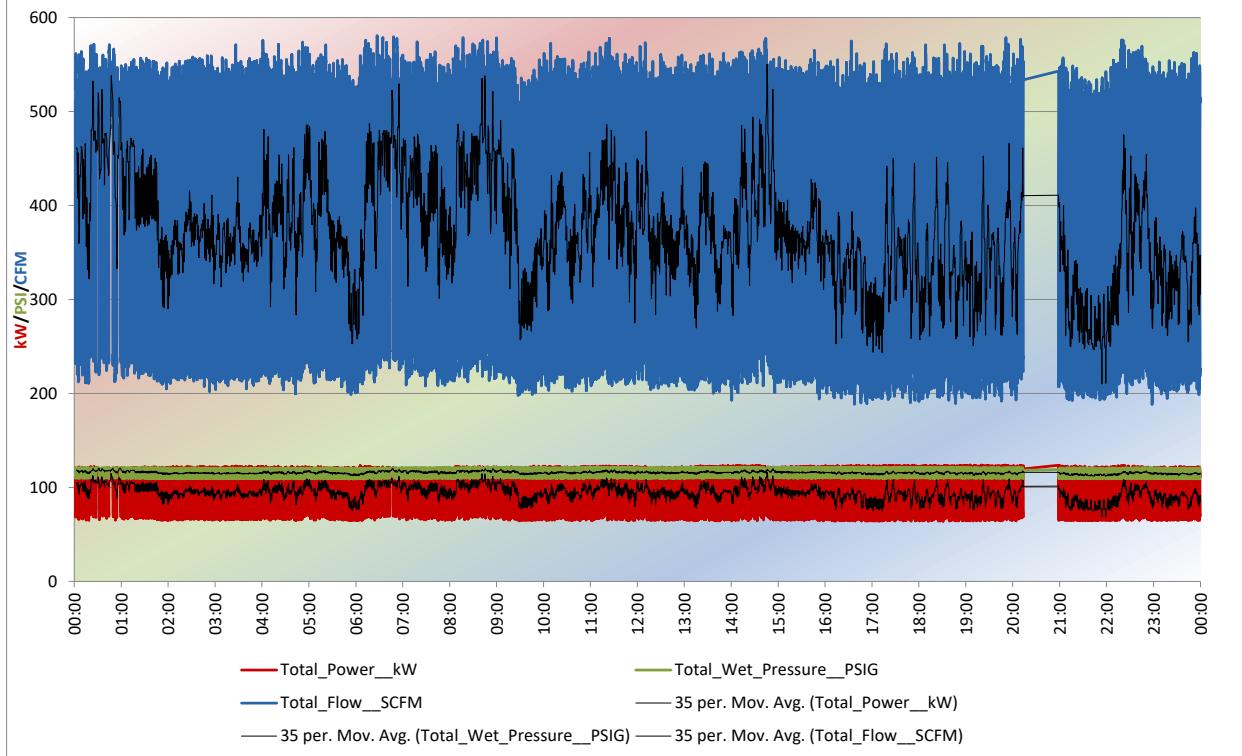
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Monday, Jul 20, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Monday, Jul 20, 2020

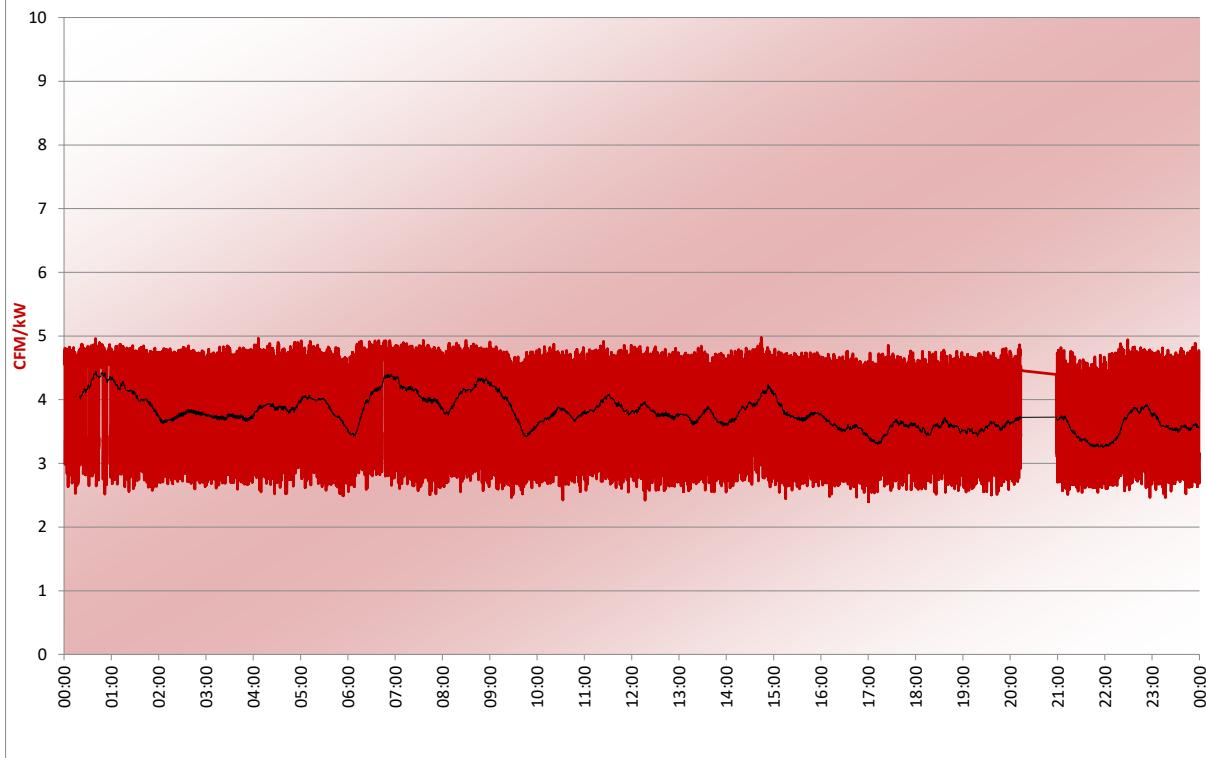


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Tuesday, Jul 21, 2020

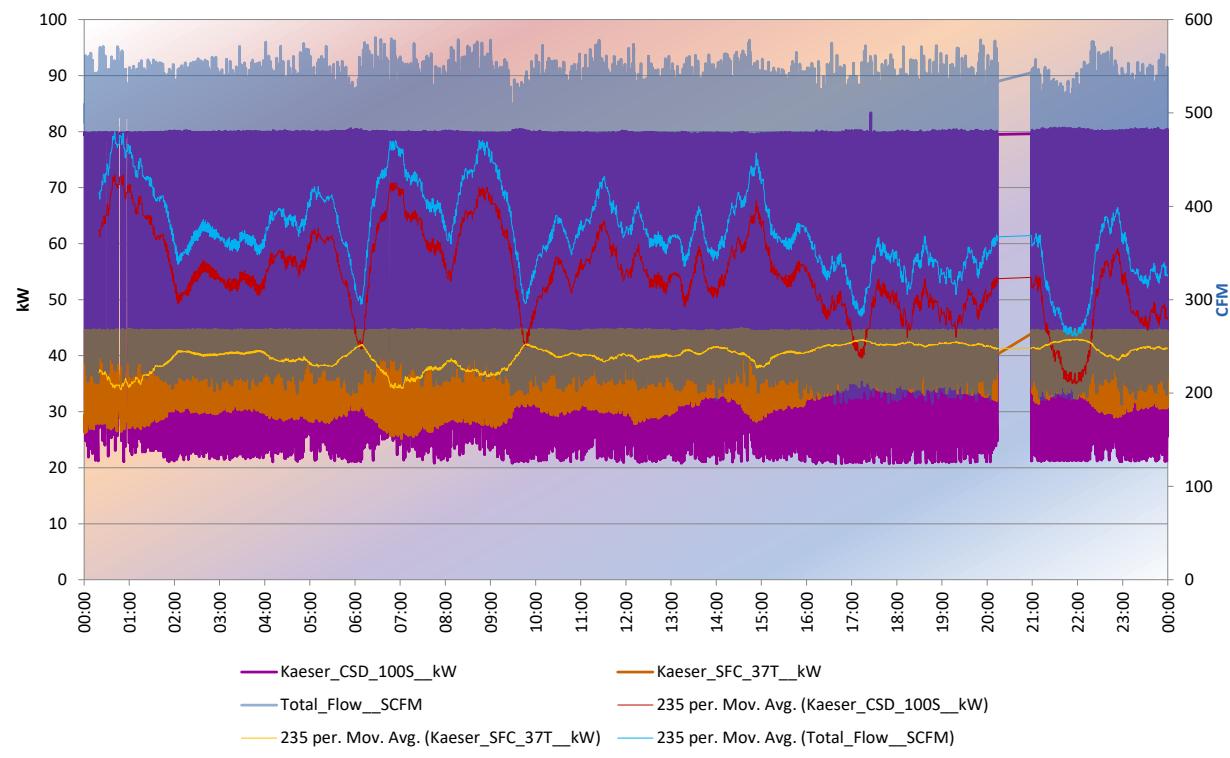


Tuesday, 7/21/2020						
First (1st) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	3.00	21.04	28.98	208.77	64.93	112.08
Avg	3.85	56.76	39.75	384.39	96.51	116.22
Max	4.79	79.76	44.35	559.45	118.28	121.03
Second (2nd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.88	21.11	35.45	200.13	64.83	110.18
Avg	3.56	47.63	41.78	330.97	89.42	114.87
Max	4.66	79.62	44.28	538.72	116.50	119.31
Third (3rd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	3.03	21.31	27.30	206.87	65.20	110.76
Avg	3.95	58.79	38.43	396.08	97.22	116.00
Max	4.80	79.85	44.18	553.53	117.42	120.73

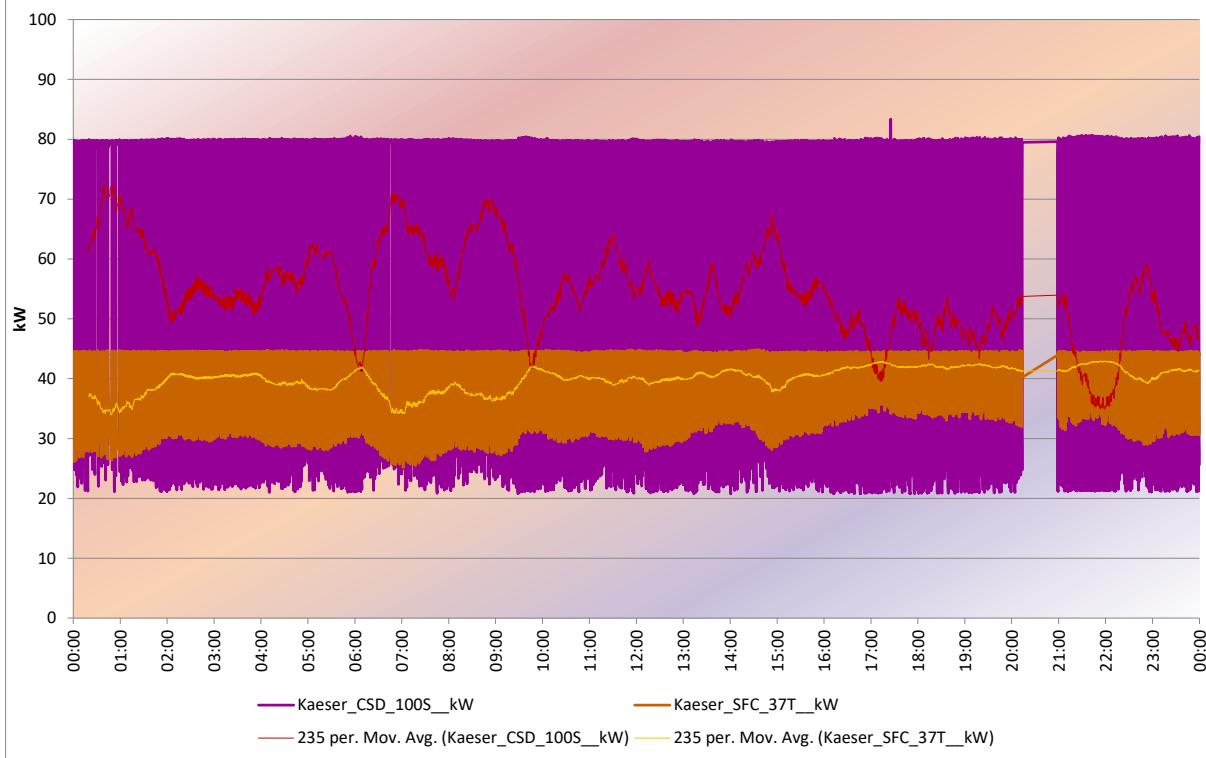
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Tuesday, Jul 21, 2020



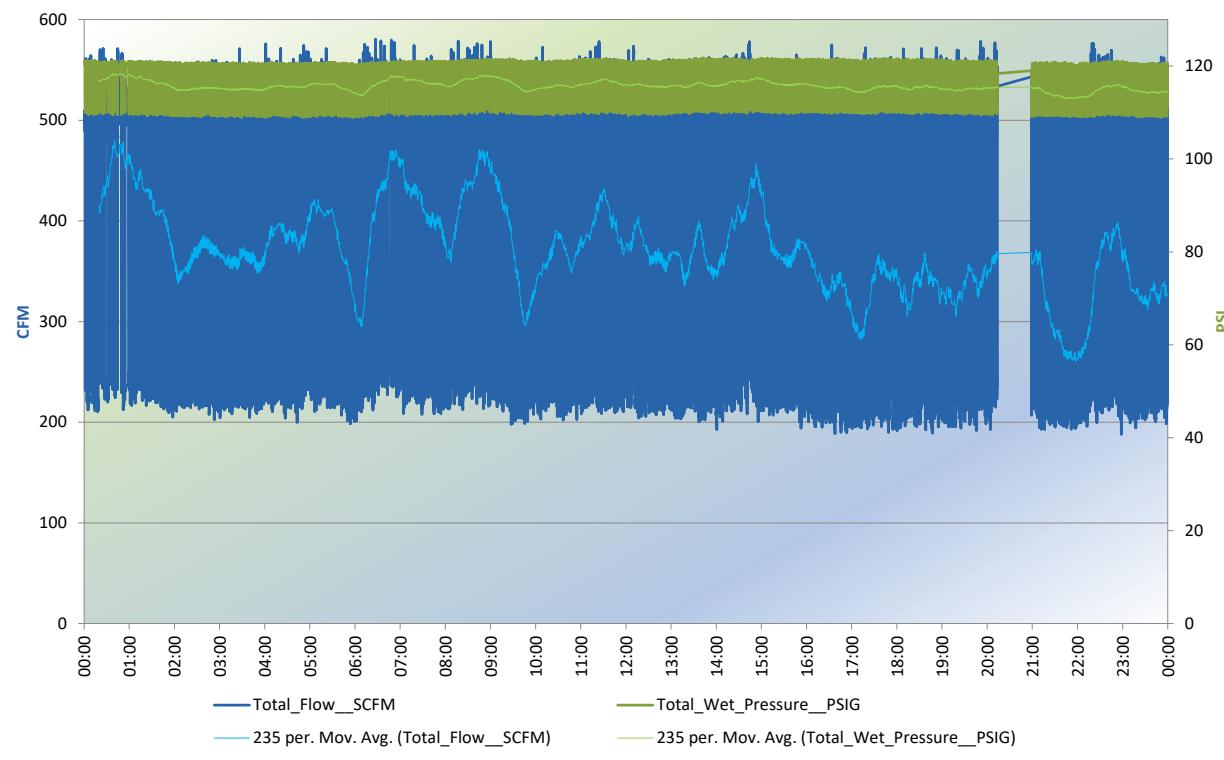
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Compressed Air System Data - Power by Compressor and Flow
Tuesday, Jul 21, 2020



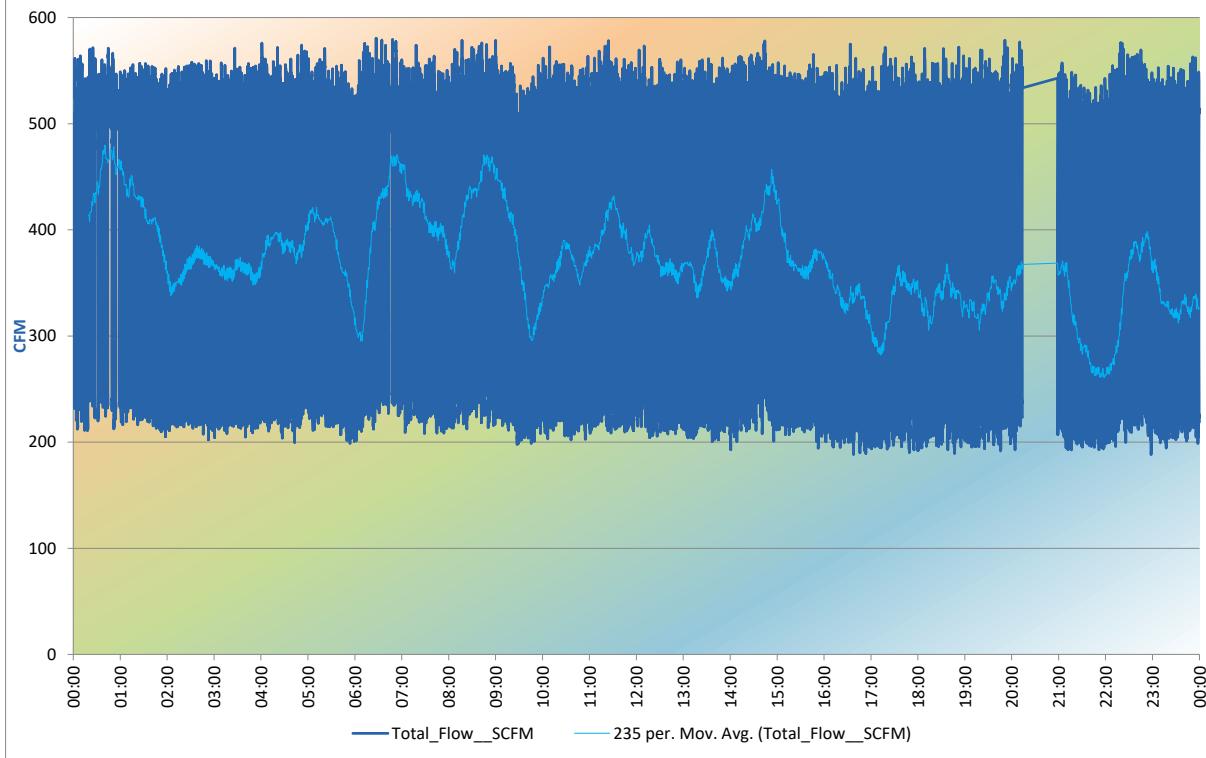
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Compressed Air System Data - Power by Compressor
Tuesday, Jul 21, 2020



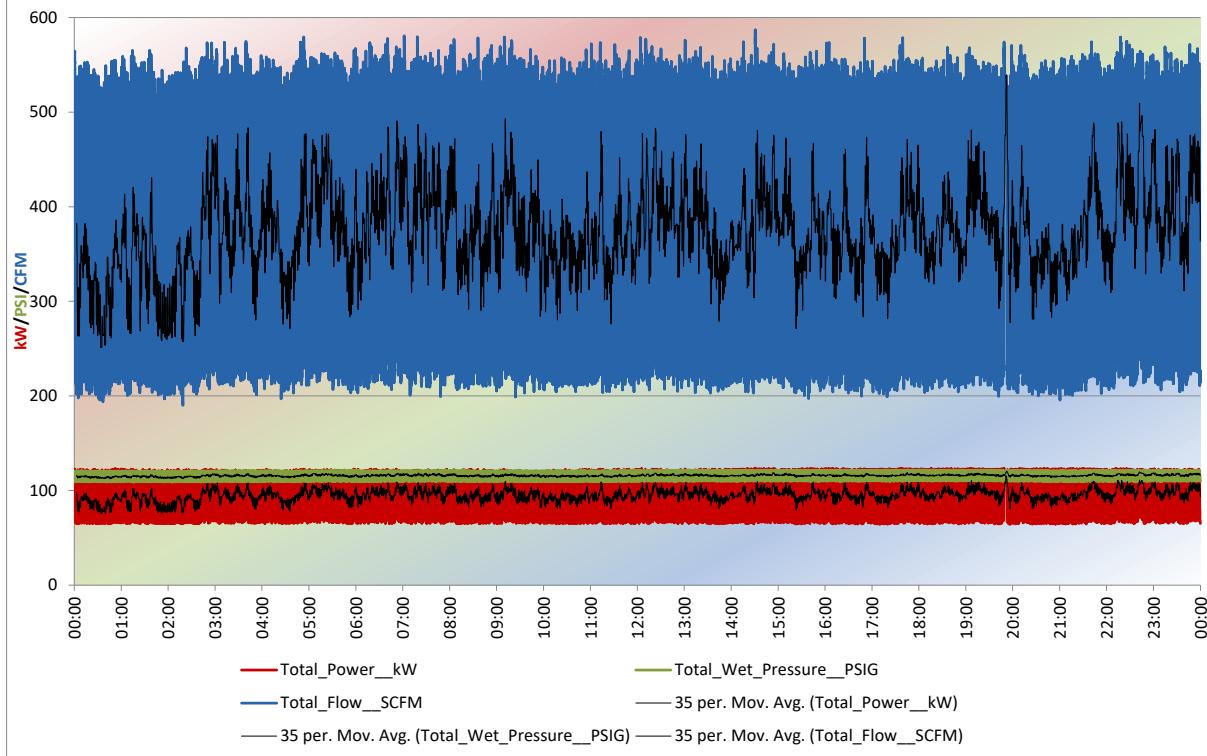
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Tuesday, Jul 21, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Tuesday, Jul 21, 2020

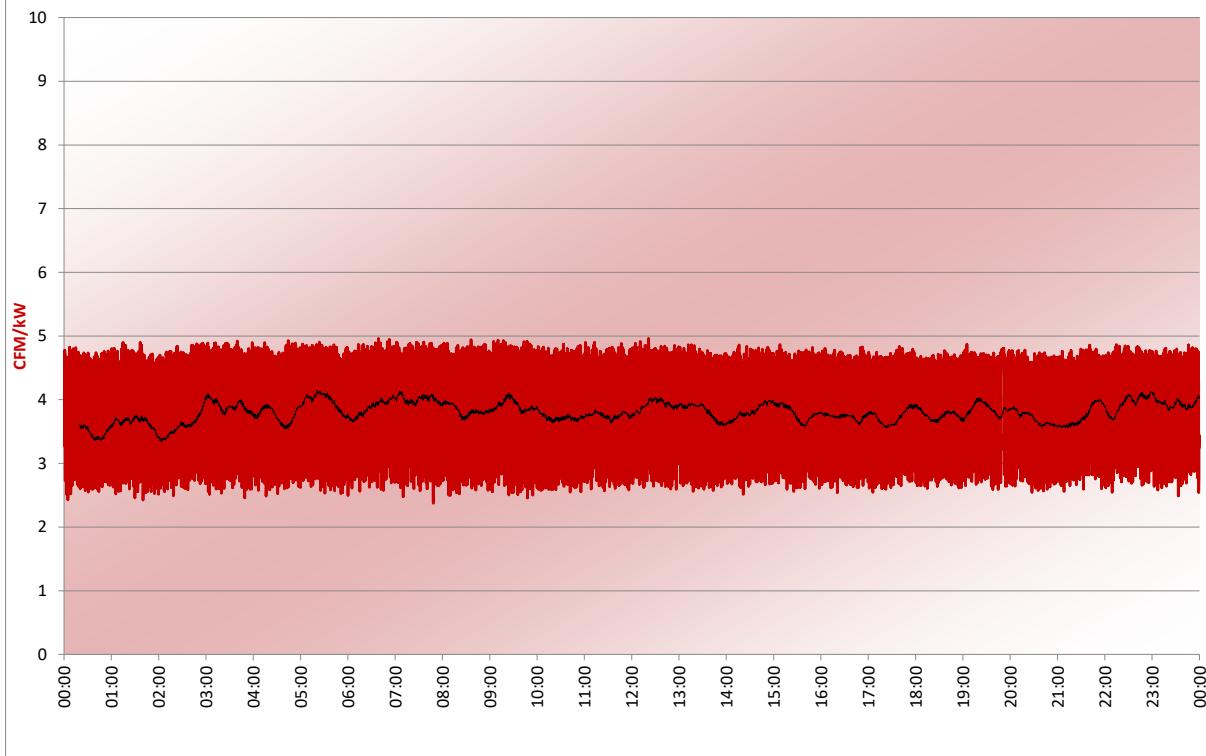


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Wednesday, Jul 22, 2020

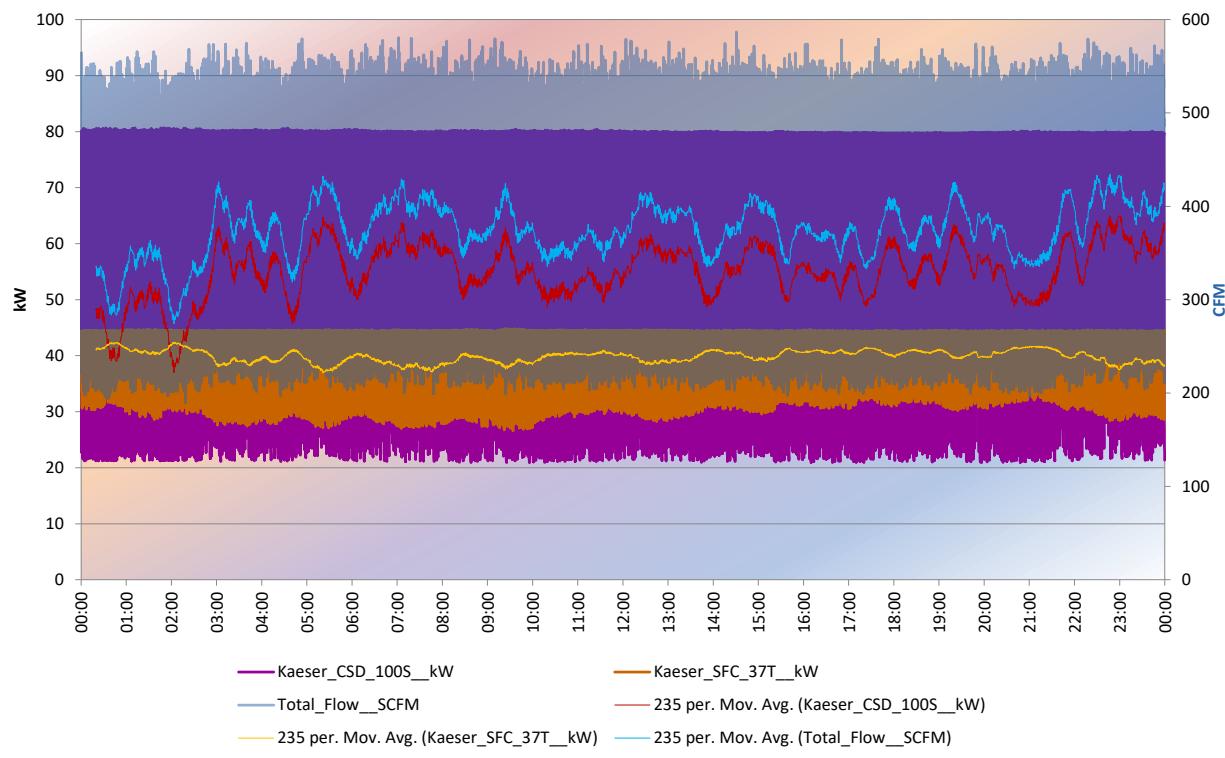


Wednesday, 7/22/2020						
First (1st) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	3.02	23.89	31.03	209.85	67.98	111.87
Avg	3.81	55.18	39.77	375.03	94.95	115.77
Max	4.80	79.84	44.21	547.12	117.01	120.77
Second (2nd) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	3.05	24.28	29.51	210.72	68.18	111.66
Avg	3.81	56.40	40.21	380.76	96.61	116.13
Max	4.73	79.90	44.00	559.64	118.62	120.96
Third (3rd) Shift						
Statistics	CFM_kw	Kaeser_CSD_100S_kw	Kaeser_SFC_37T_kw	Total_Flow_SCFM	Total_Power_kw	Total_Wet_Pressure_PSIG
Min	2.97	21.34	29.08	206.35	65.17	110.16
Avg	3.79	53.67	39.66	366.88	93.33	115.33
Max	4.81	80.09	44.35	548.50	115.74	120.54

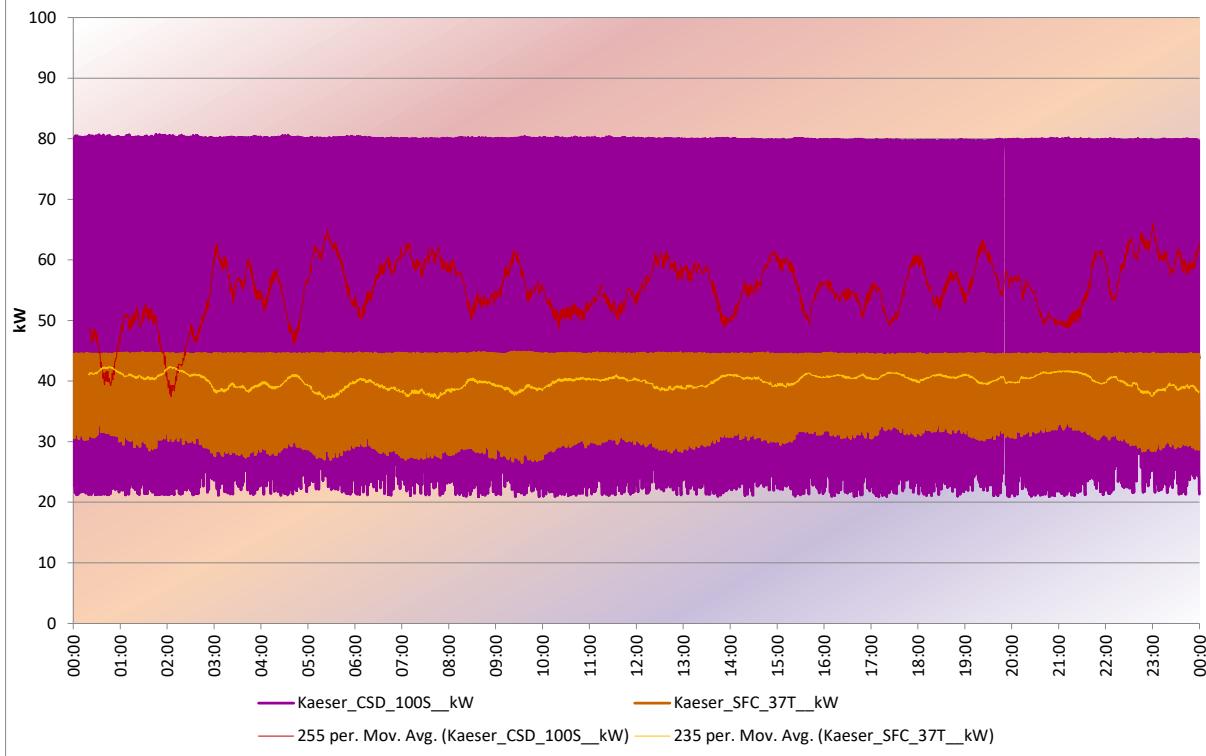
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Wednesday, Jul 22, 2020



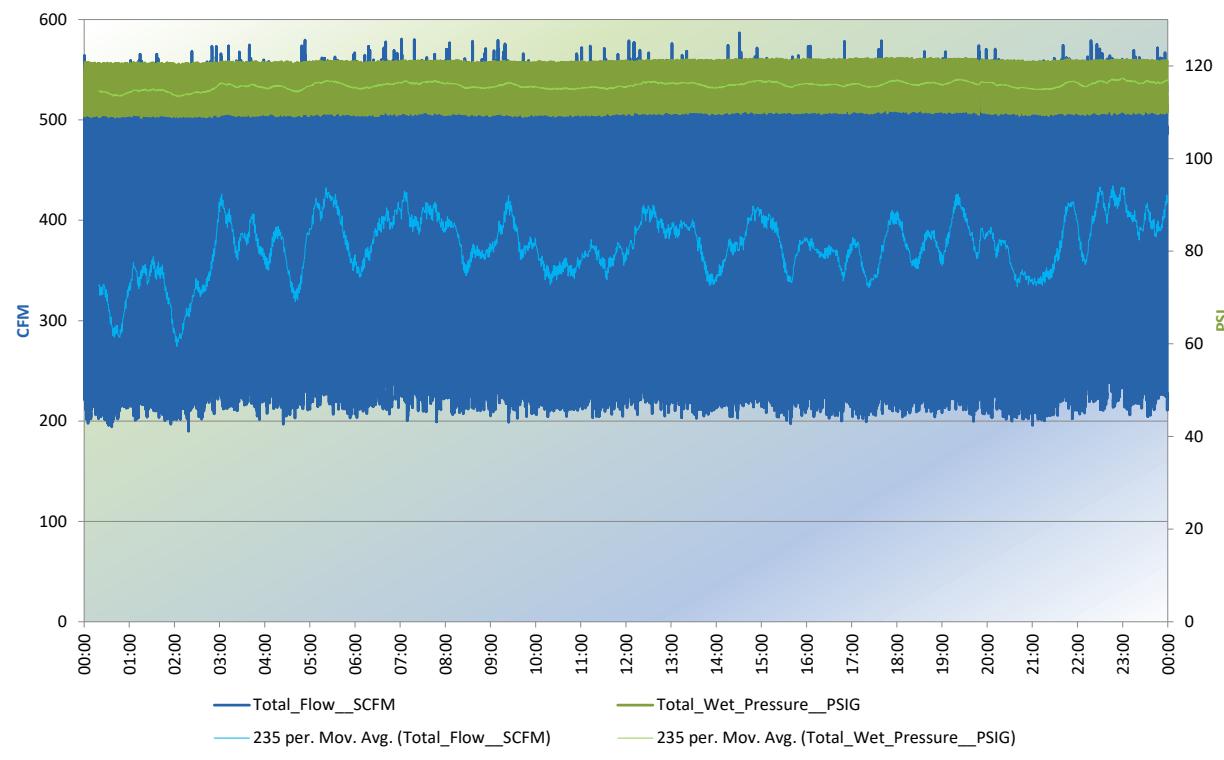
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Wednesday, Jul 22, 2020



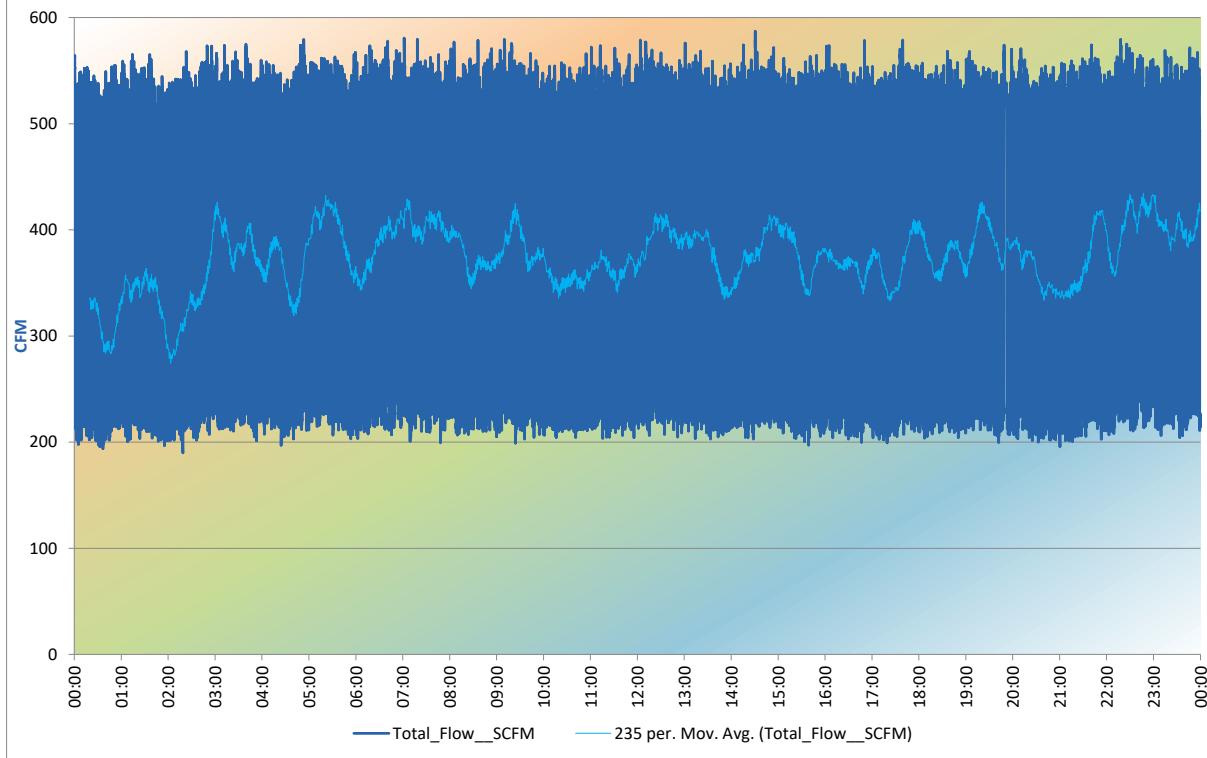
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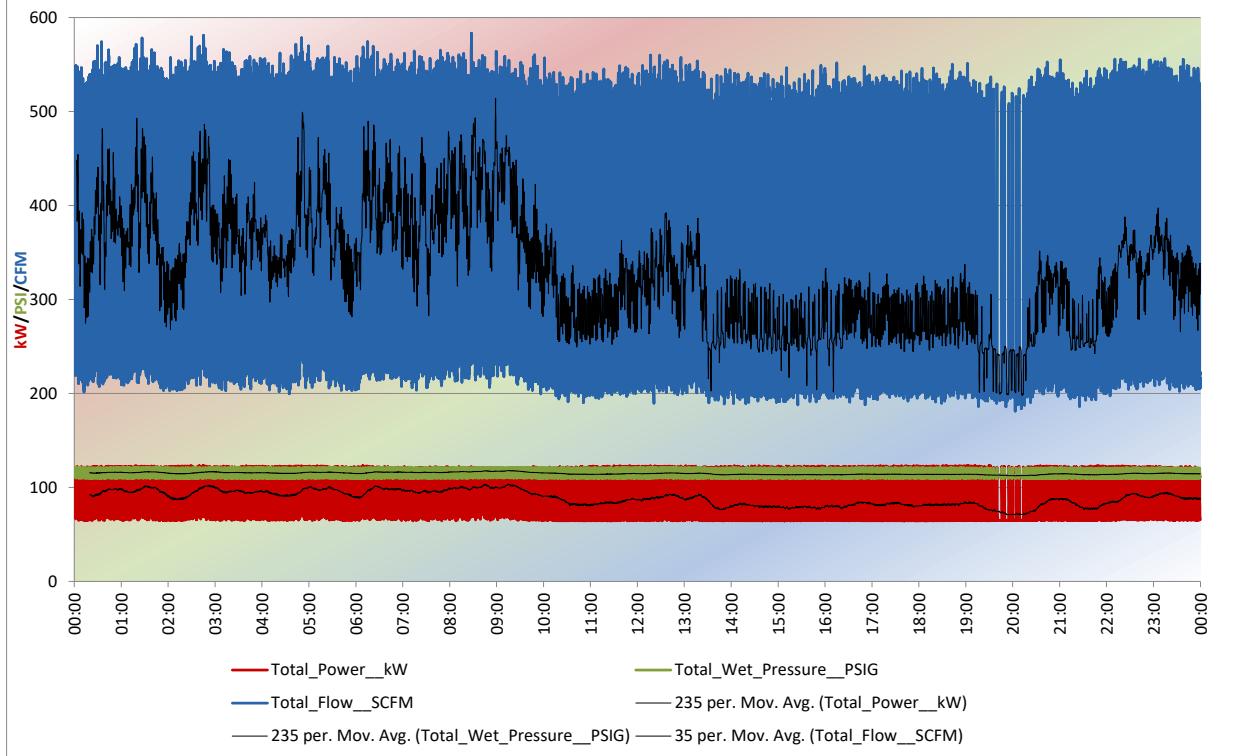
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Compressed Air System Data - Flow & Pressure
Wednesday, Jul 22, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Wednesday, Jul 22, 2020

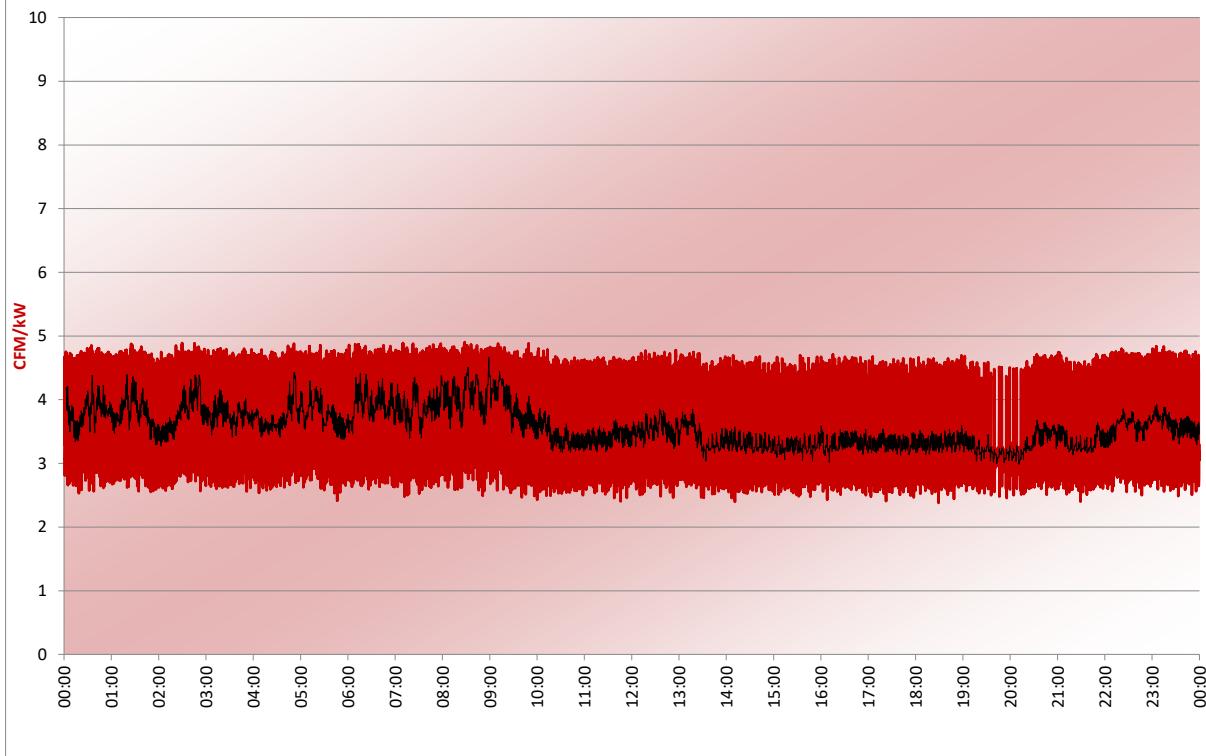


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Thursday, Jul 23, 2020

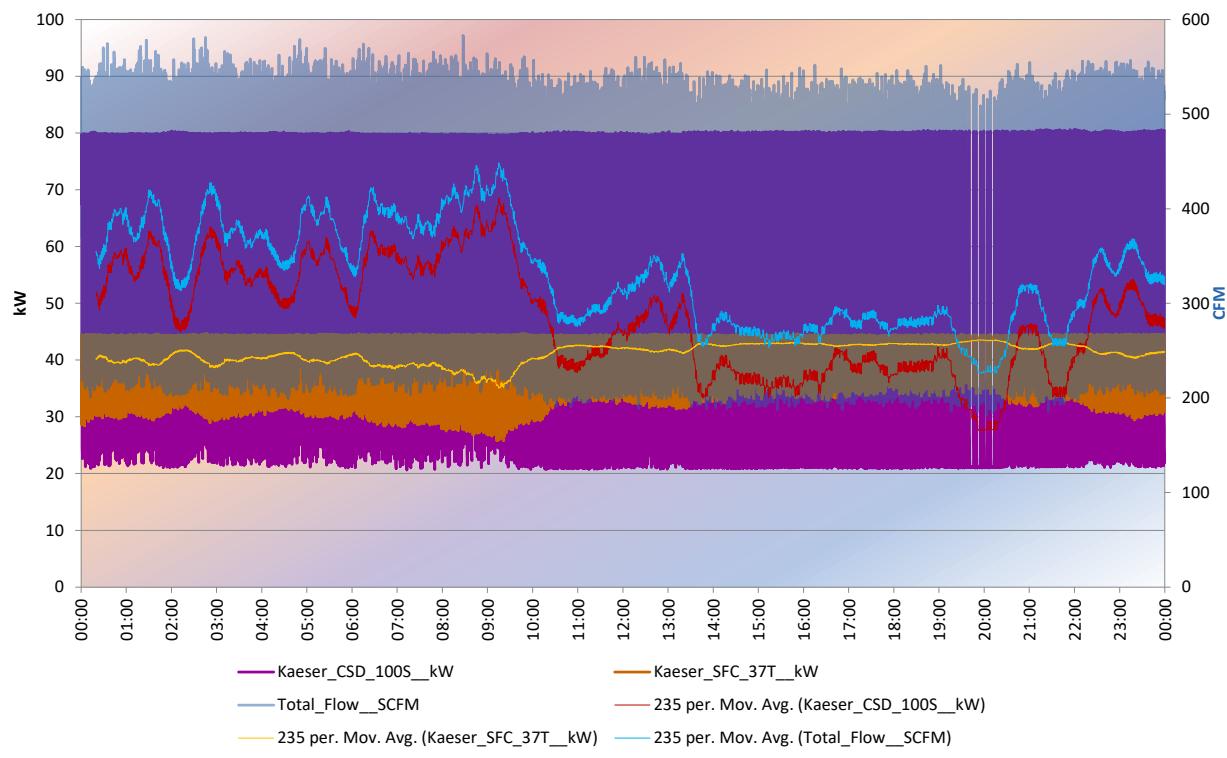


Thursday, 7/23/2020						
First (1st) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.88	20.94	27.78	199.14	64.60	110.38
Avg	3.54	46.03	41.14	321.22	87.17	114.86
Max	4.74	79.67	44.33	538.61	115.14	120.91
Second (2nd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.87	21.03	37.44	195.89	64.63	109.55
Avg	3.38	40.43	42.40	290.38	82.83	113.98
Max	4.26	72.12	44.31	471.94	109.56	118.06
Third (3rd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	3.02	22.47	30.84	209.99	66.51	111.63
Avg	3.81	55.79	39.94	377.52	95.73	115.79
Max	4.76	79.76	44.13	560.58	118.18	120.57

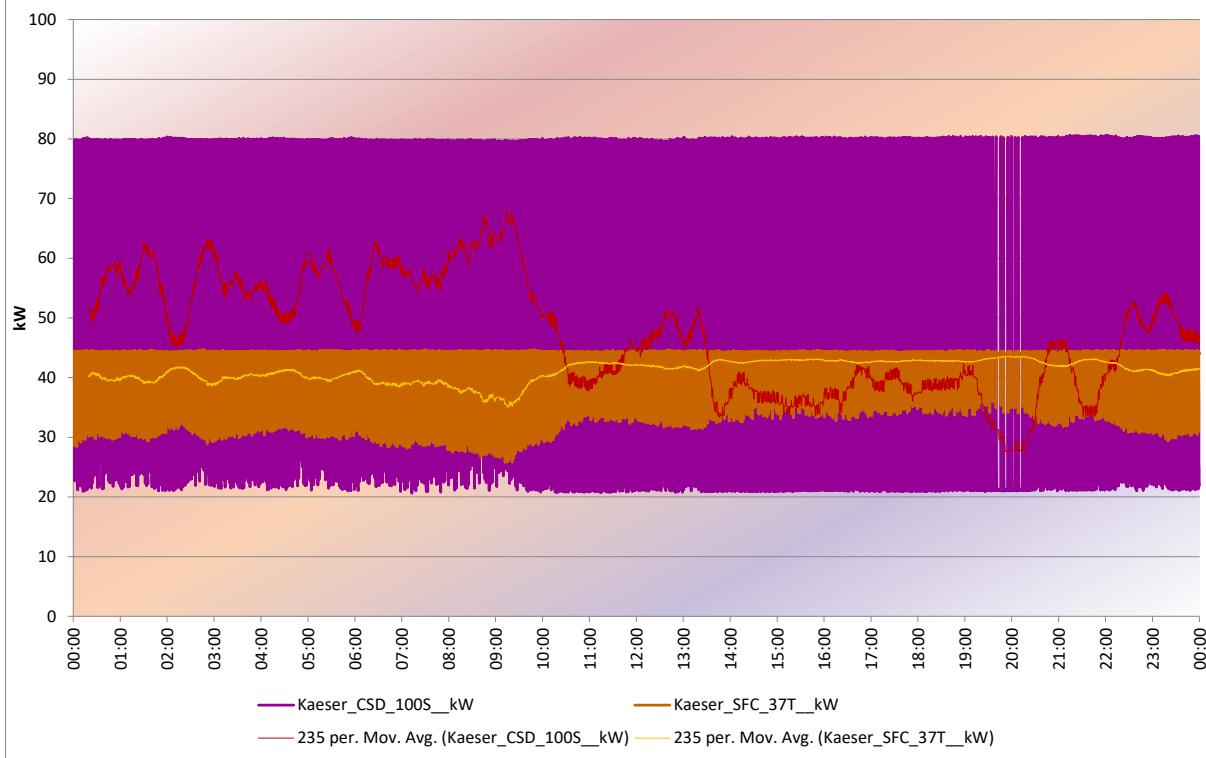
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Compressed Air System Data - Flow:Power Ratio
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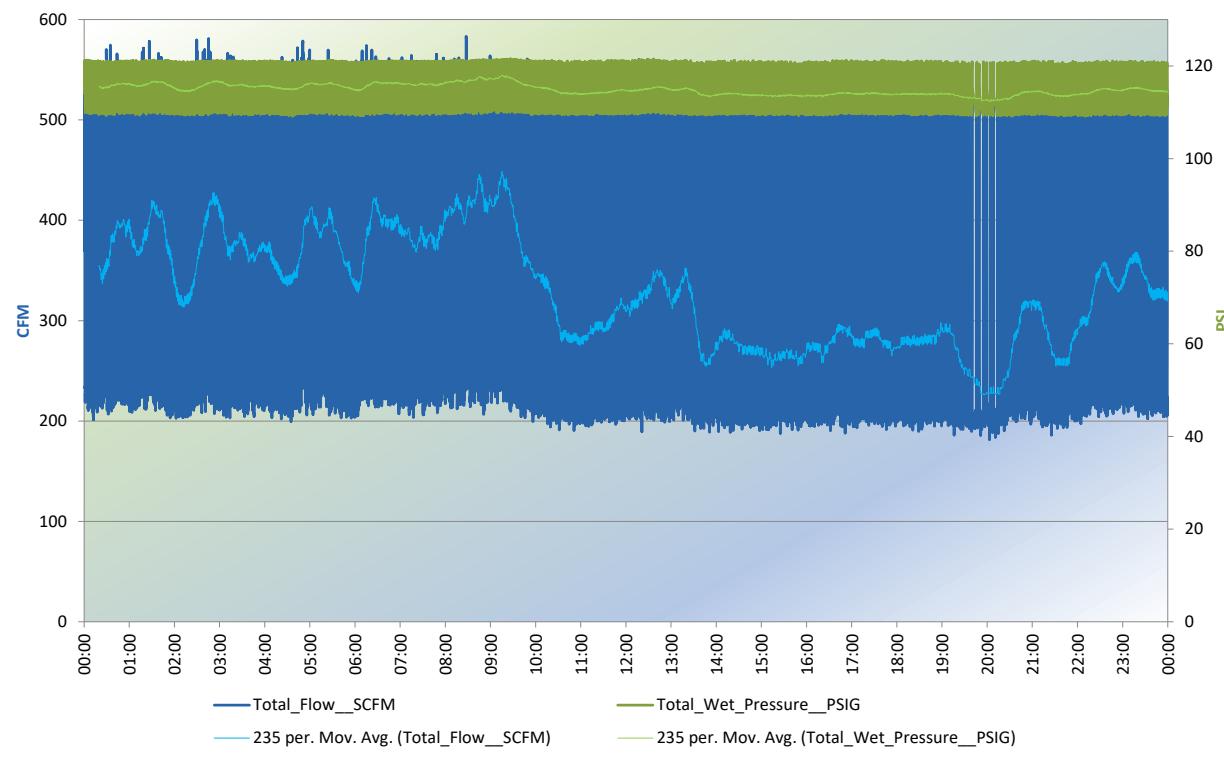
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Compressed Air System Data - Power by Compressor and Flow
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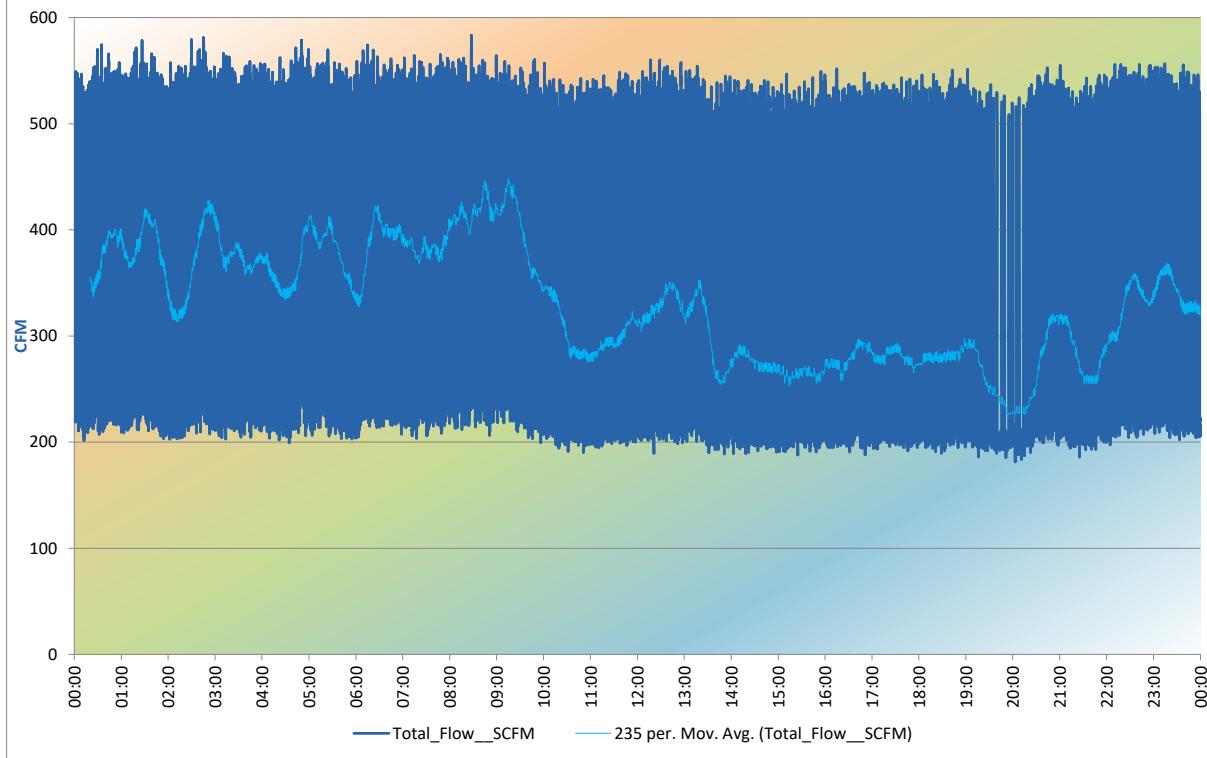
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Compressed Air System Data - Power by Compressor
Thursday, Jul 23, 2020



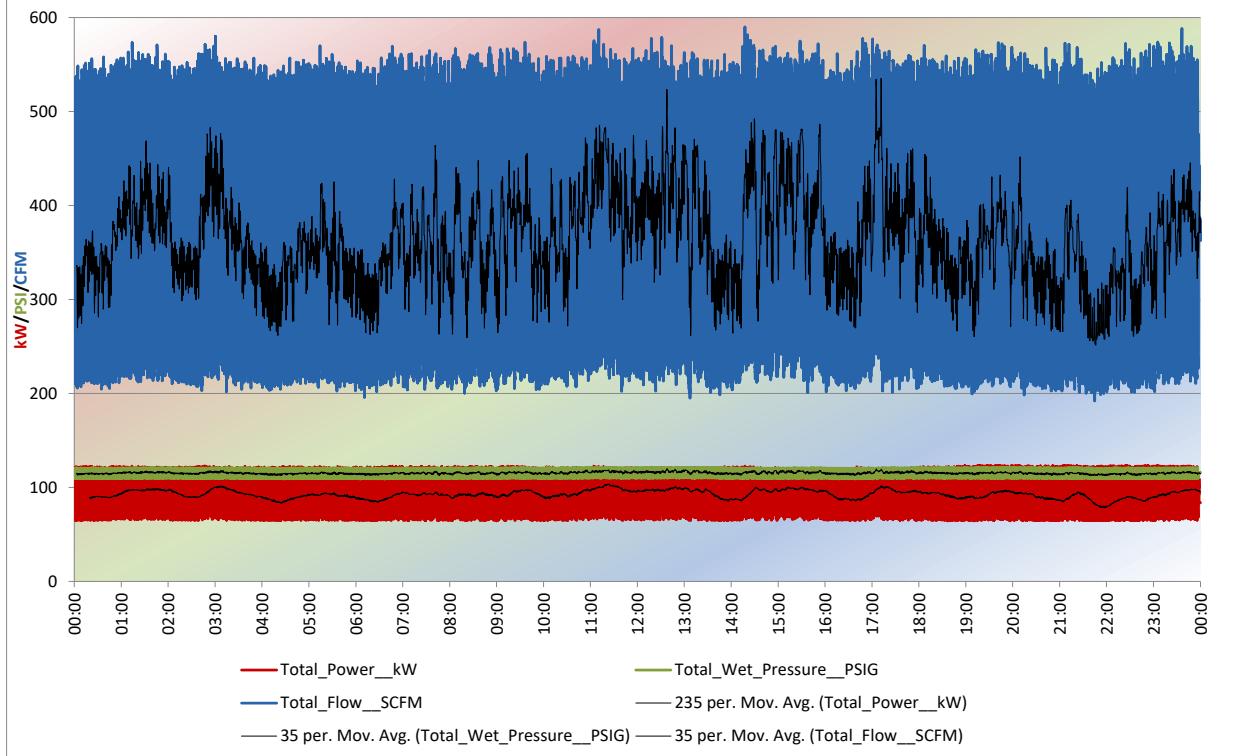
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Thursday, Jul 23, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Thursday, Jul 23, 2020

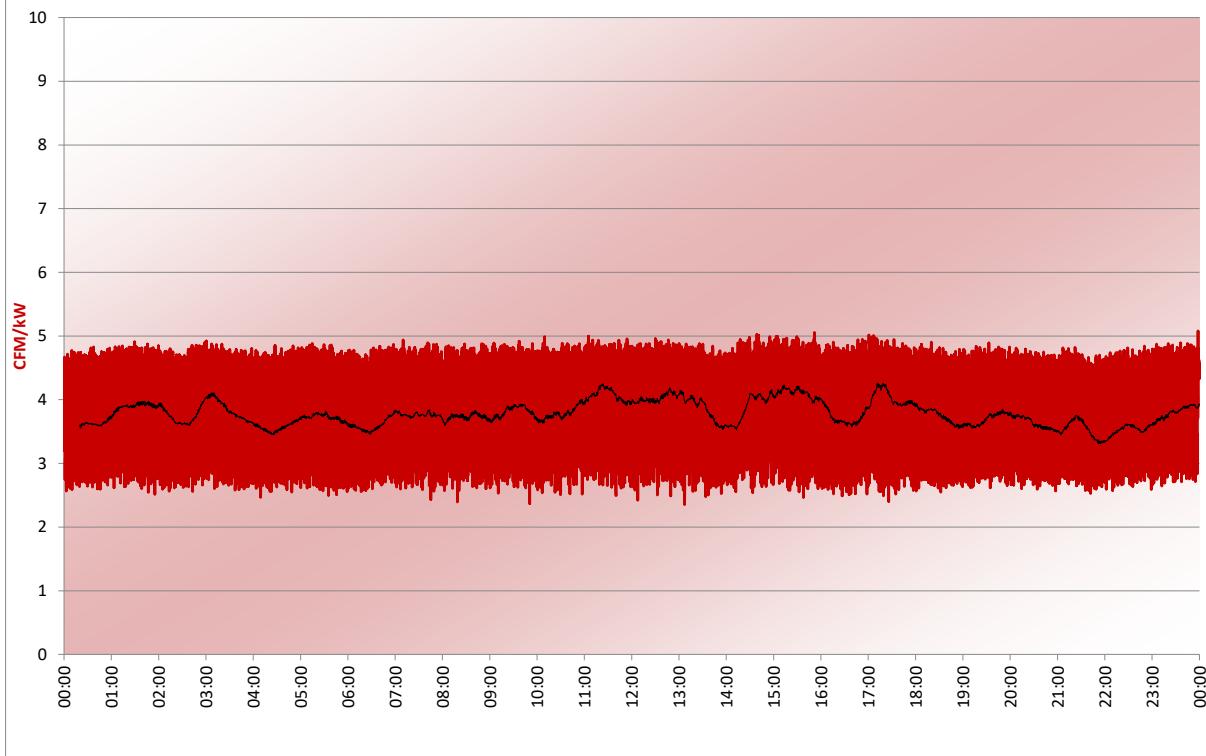


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Friday, Jul 24, 2020

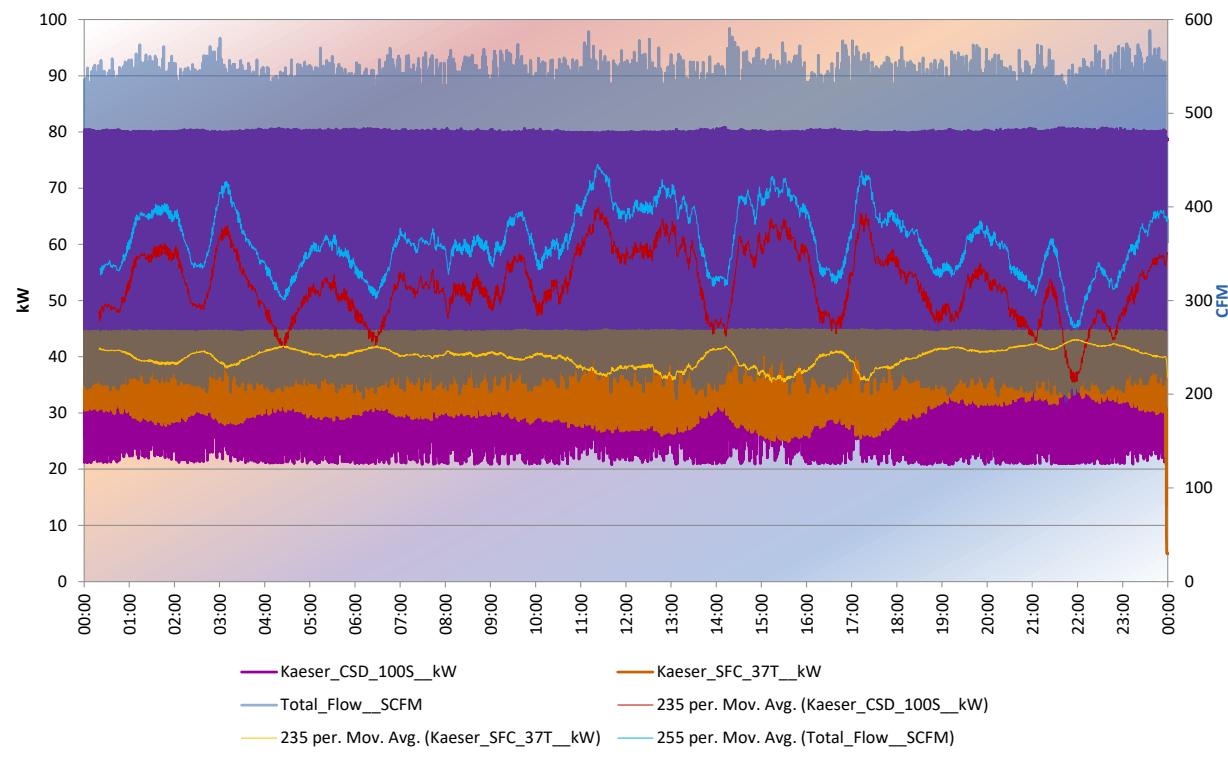


Friday, 7/24/2020						
First (1st) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	3.06	21.71	27.61	212.80	65.80	111.34
Avg	3.91	56.39	38.72	384.77	95.11	115.93
Max	4.87	80.01	44.51	559.08	115.71	120.99
Second (2nd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.97	21.13	5.05	207.87	65.05	110.70
Avg	3.71	50.63	40.58	351.28	91.22	115.07
Max	4.84	79.90	44.51	544.85	116.33	120.03
Third (3rd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	3.03	21.54	32.09	211.34	65.55	111.04
Avg	3.72	51.60	40.37	354.91	91.97	115.01
Max	4.73	79.88	44.28	544.12	115.39	119.68

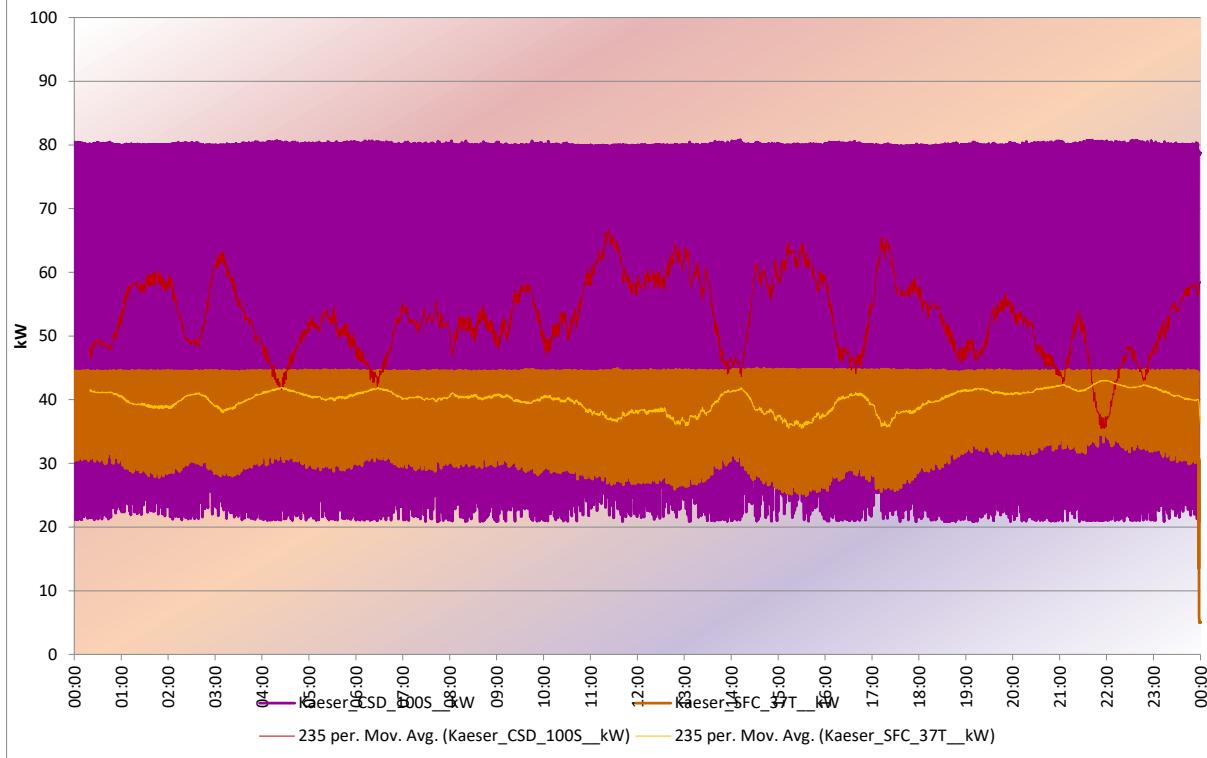
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Friday, Jul 24, 2020



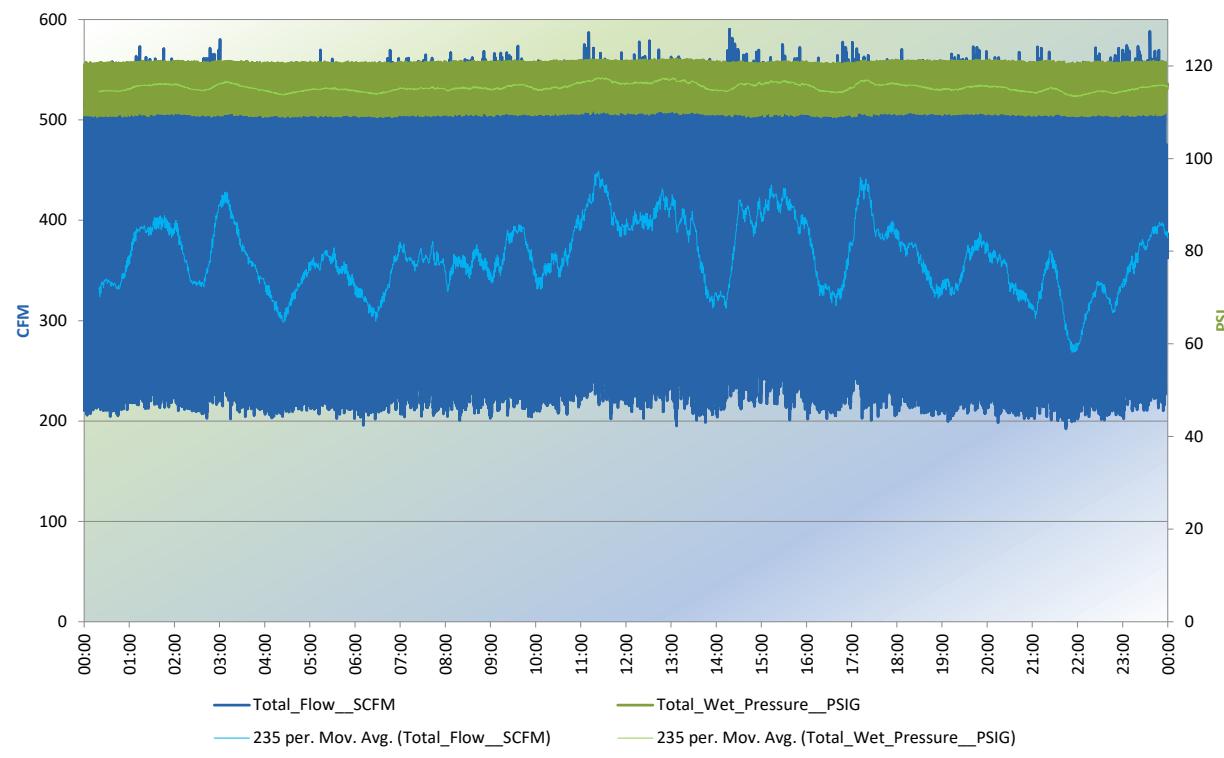
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor and Flow
Friday, Jul 24, 2020



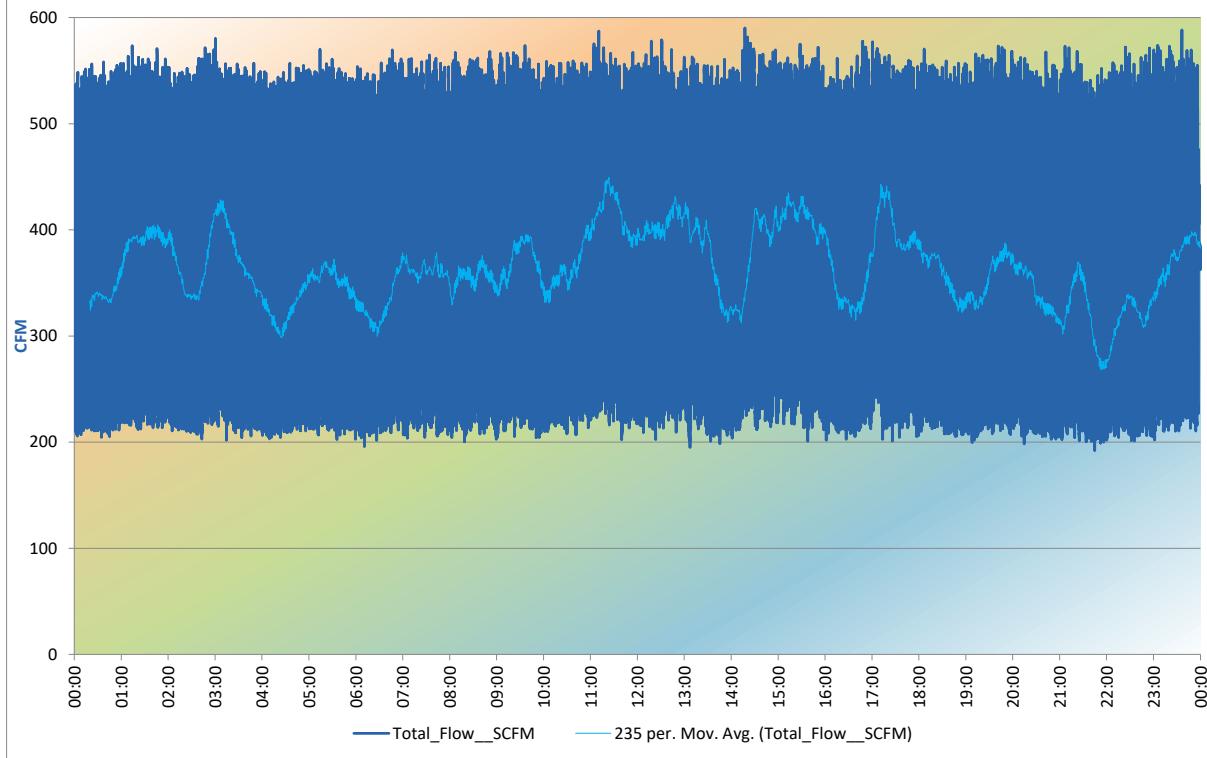
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor
Friday, Jul 24, 2020



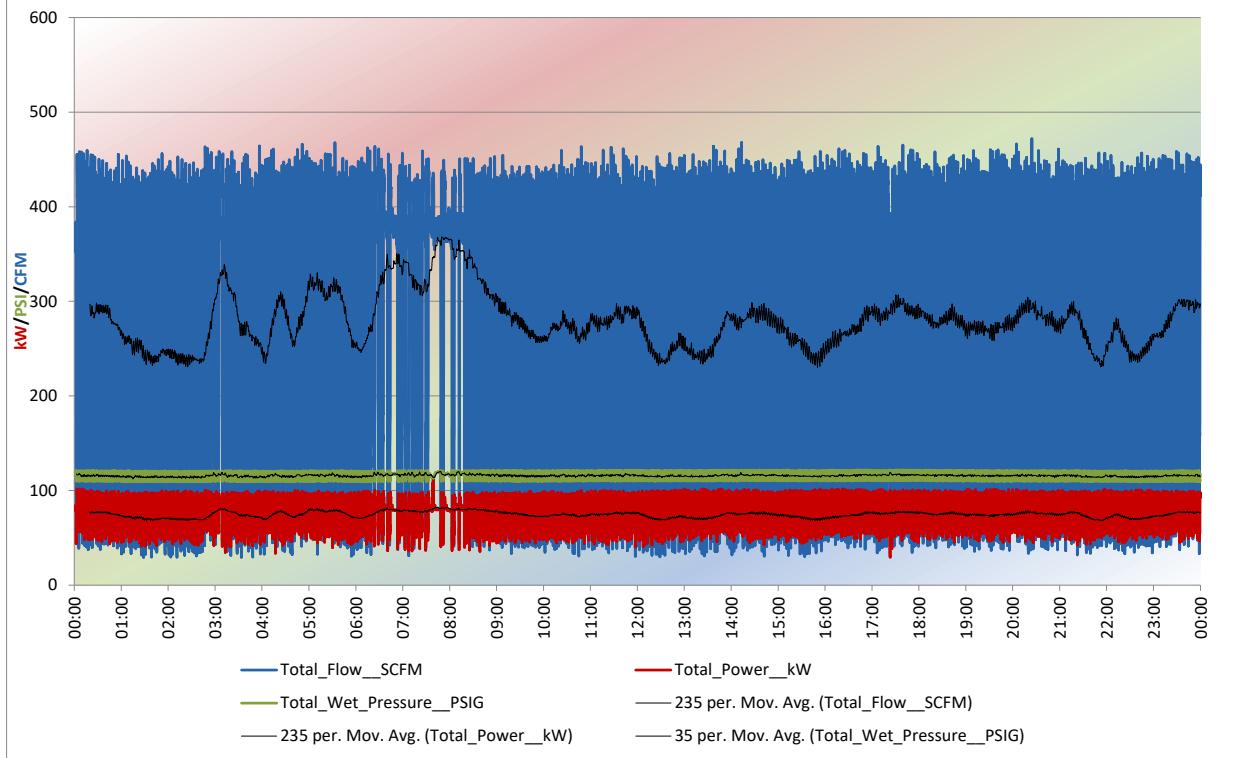
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Friday, Jul 24, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Friday, Jul 24, 2020

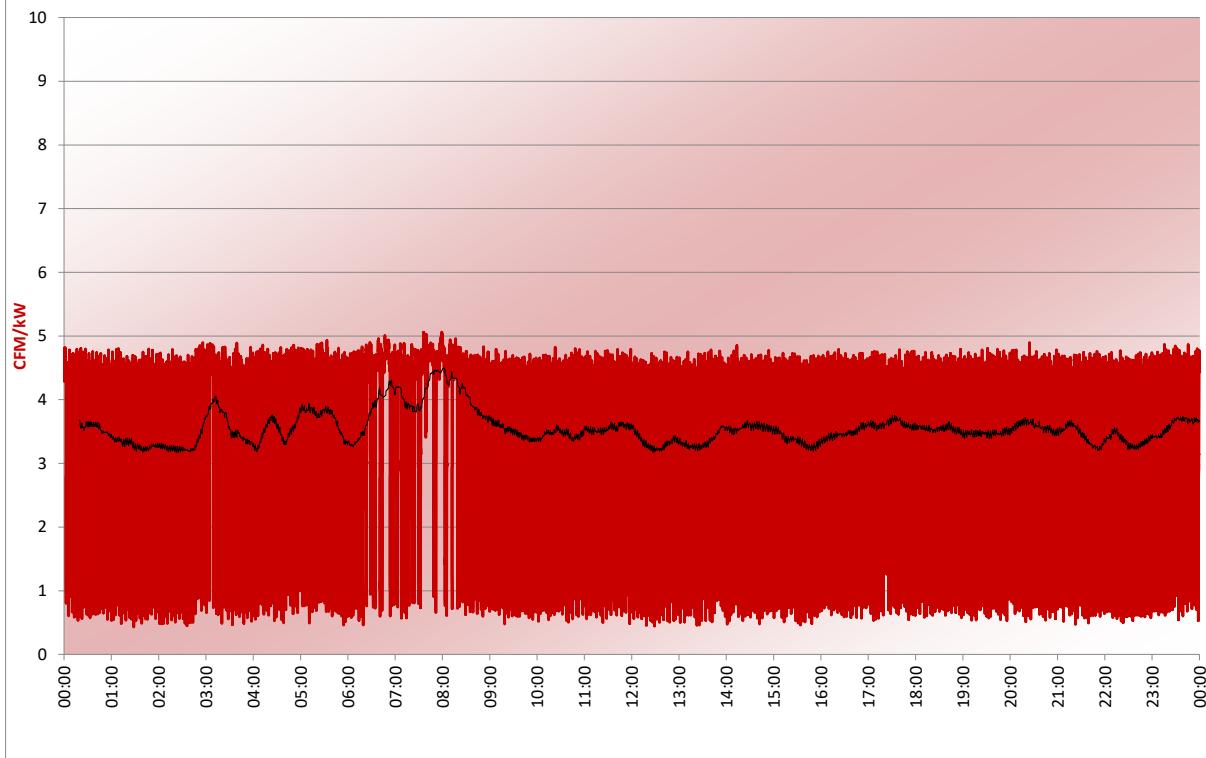


Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power, Flow & Pressure
Saturday, Jul 25, 2020

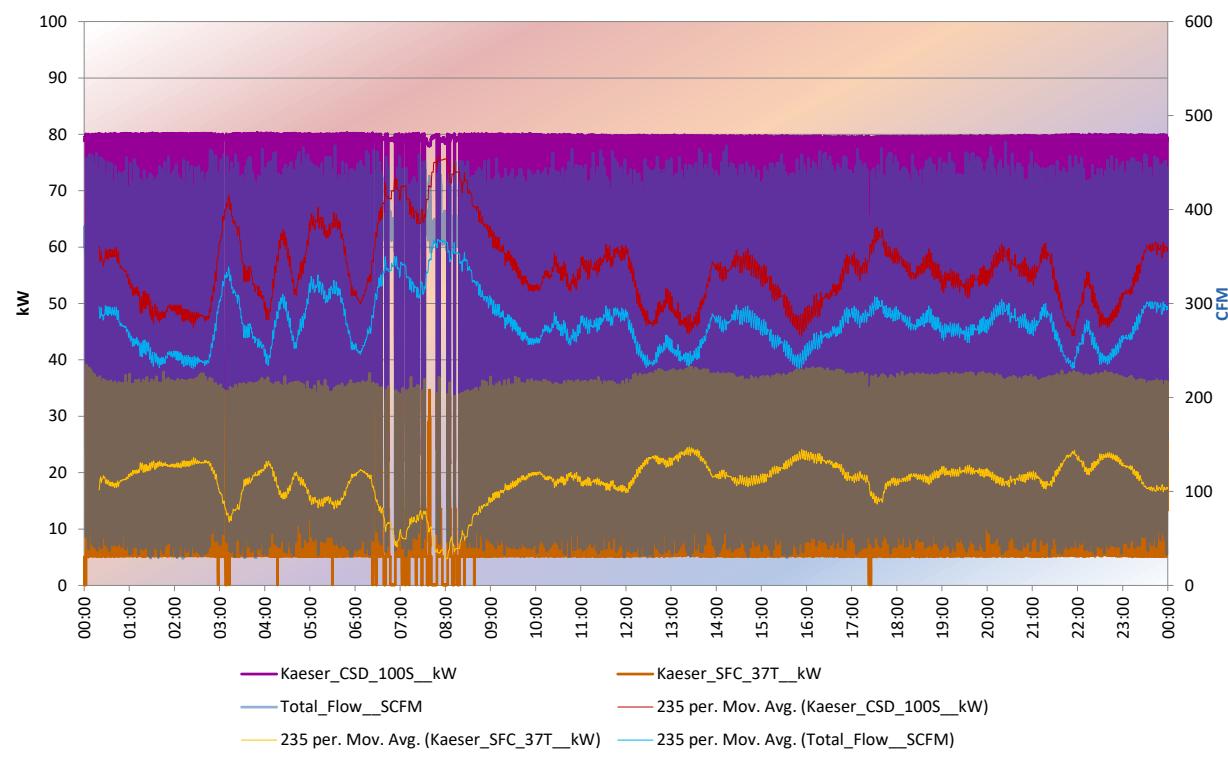


Saturday, 7/25/2020						
First (1st) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.12	21.01	0.09	113.37	52.82	111.05
Avg	3.50	55.17	18.91	273.94	74.09	115.78
Max	4.79	79.79	35.78	425.96	93.25	120.65
Second (2nd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.22	21.25	4.46	119.13	52.14	110.62
Avg	3.52	54.90	19.68	276.20	74.58	115.65
Max	4.50	79.67	36.43	419.08	93.59	120.57
Third (3rd) Shift						
Statistics	CFM_kW	Kaeser_CSD_100S_kW	Kaeser_SFC_37T_kW	Total_Flow_SCFM	Total_Power_kW	Total_Wet_Pressure_PSIG
Min	2.06	21.20	0.09	109.95	52.21	110.16
Avg	3.63	58.55	16.60	288.22	75.15	115.50
Max	4.92	80.11	33.91	433.14	93.90	120.34

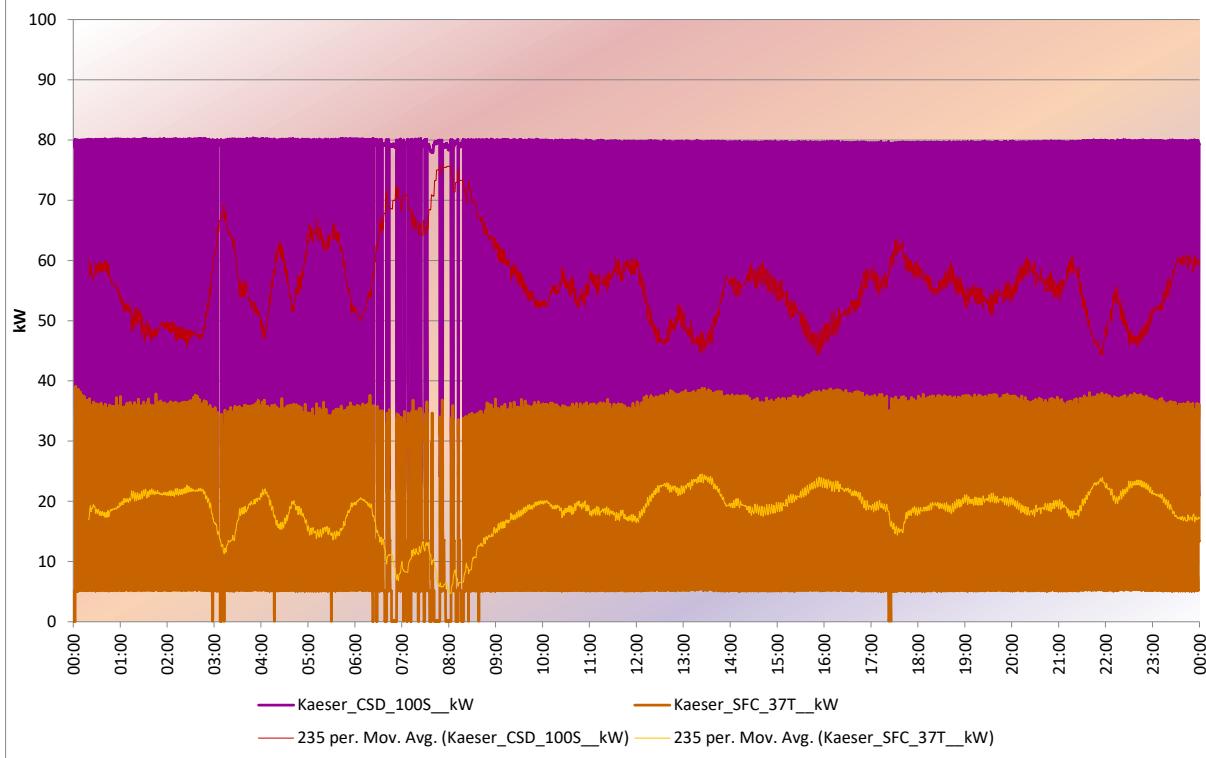
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow:Power Ratio
Saturday, Jul 25, 2020



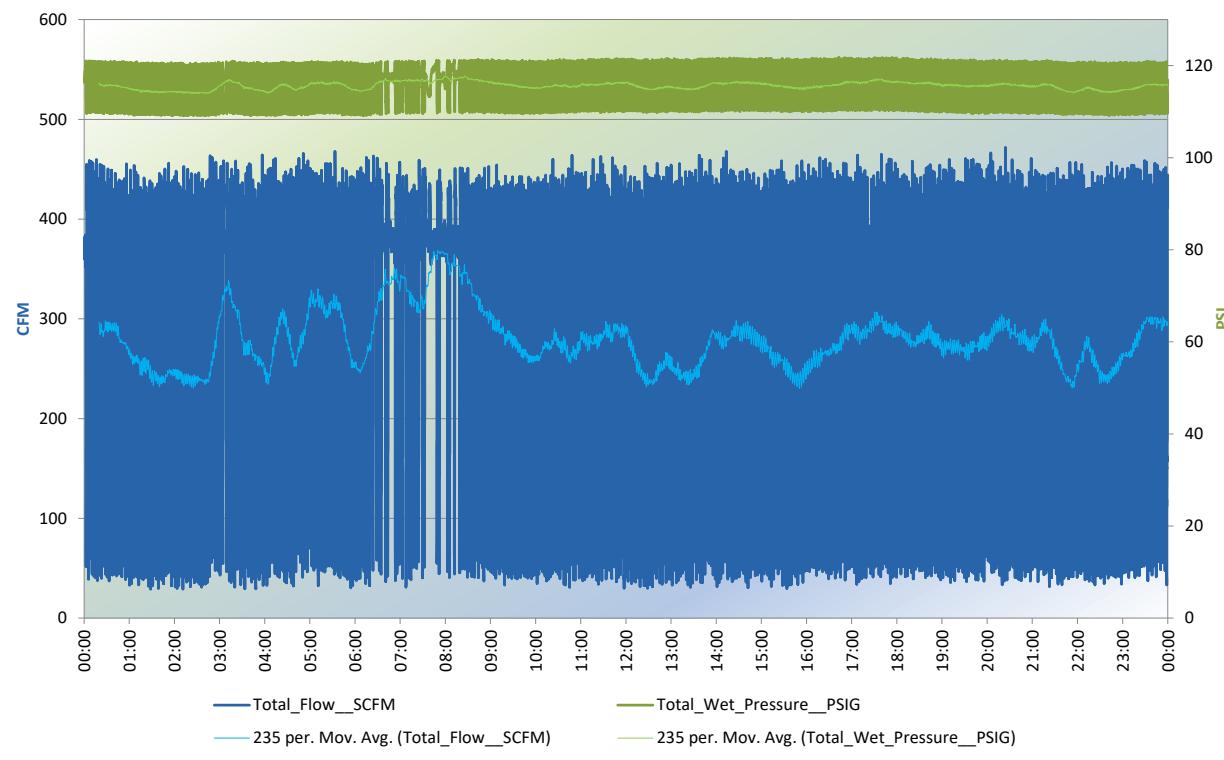
Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor and Flow
Saturday, Jul 25, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Power by Compressor
Saturday, Jul 25, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow & Pressure
Saturday, Jul 25, 2020



Commonwealth Dairy - Brattleboro, VT
Compressed Air System Data - Flow by Location
Saturday, Jul 25, 2020

